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ELEMENTS

OF

HARMONY

BY

STEPHEN A. EMERY.

ARTHUR P. SCHMIDT.

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PREFACE TO THE LATEST EDITION.

Although this work was prepared with some hesitancy, because of the number of useful Harmony manuals already before the public, I trust that my principal aim, *to simplify* this interesting study, has been successful. With this purpose in mind, I have limited the scope of this book to such a course of study as would best prepare the student to analyze and understand any harmonies that occur in standard music, and also to harmonize melodies of a simple, non-contrapuntal character. Exceptional matters have been excluded, as being more readily understood when the usual forms shall have become familiar.

As remarked in the first edition, this book is not an untried experiment: its rules, substantially as here given, have been used for many years by my students. Several suggestions, that might seem superfluous, had their origin in the repeated corrections of students' exercises: yet every thorough teacher will find occasion to supplement them with assistance adapted to the wants of each pupil.

In view of the cordial endorsement which this work has received at the hands of professional musicians, I desire to extend my thanks to those who have so heartily contributed to its success.

BOSTON, September, 1890.

STEPHEN A. EMERY.

TO TEACHERS AND PUPILS.

Your cooperation is earnestly requested in the following particulars: —

1. Students, whether reciting singly or in classes, are to repeat accurately from memory, either in substance or literally, every rule, and be able to write an illustration of each.

2. Roman numerals, with their proper distinctions in size and signs, must invariably be written under the chords, unless otherwise directed in the book.

3. The lessons must not on any account be changed by the student after the teacher's corrections — the marks of errors will be found the most useful part of the lesson for future reference.

4. Students must be able to state at each lesson that they have carefully played over the previous lesson, at least three times, as corrected by the teacher.

5. Students must have as regular an hour at which to begin their daily study of Harmony as they have for vocal or instrumental music. The too common habit of placing Harmony last, as though it were a study to be attended to only when body and brain are already weary with other work, is a plain and sufficient reason why some find it dry and difficult. Let the fact be understood that every hour devoted to the intelligent study of Harmony is itself an indispensable part of one's study in every other department of music, enabling one to sing or play recognizably better than could otherwise be possible.

6. One should trace the application of each rule and principle that may occur in other musical studies, special attention being given to naming difficult chords and analyzing intricate modulations — in short, making the whole study of Harmony *practical* to the last degree.

Open harmony, requiring more skill in its management, is delayed till elementary principles shall have become familiar. So long as a figured bass is used, clearness of notation suggests that the tenor be written on the upper staff. Where the exercises under each rule are insufficient to make it plain through frequency of application, the instructor should add others. The slightly unmusical character of some exercises is necessitated by their being limited to the illustration of the principle under which they appear.

ELEMENTS OF HARMONY.

LESSON 1.

INTERVALS.

Degrees refer to lines and spaces — visible distances.

Steps refer to tones and half steps to semitones — audible distances.

An interval, in harmony, is the difference in pitch between two notes, or tones.*

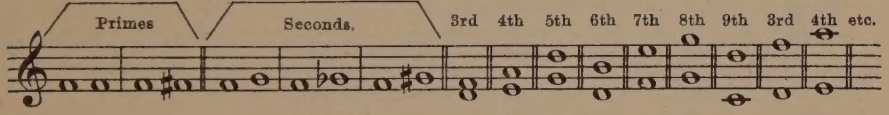
An interval takes its *general* name (prime, second, third, etc.) from the number of *degrees* it occupies; and its *specific* name (perfect, imperfect, major, etc.) from the number of *steps* it contains.

Two notes standing on the same degree, whether sounding alike or not, are called a *prime.*

Two notes standing on contiguous degrees are called a *second.*

Two notes occupying three degrees (counting the intervening degree) are called a *third.*

Intervals are reckoned in this way to ninths, inclusive; but those still larger are named as though their notes were distant from each other less than one octave, thus: — a tenth is called a third; an eleventh, a fourth; etc.

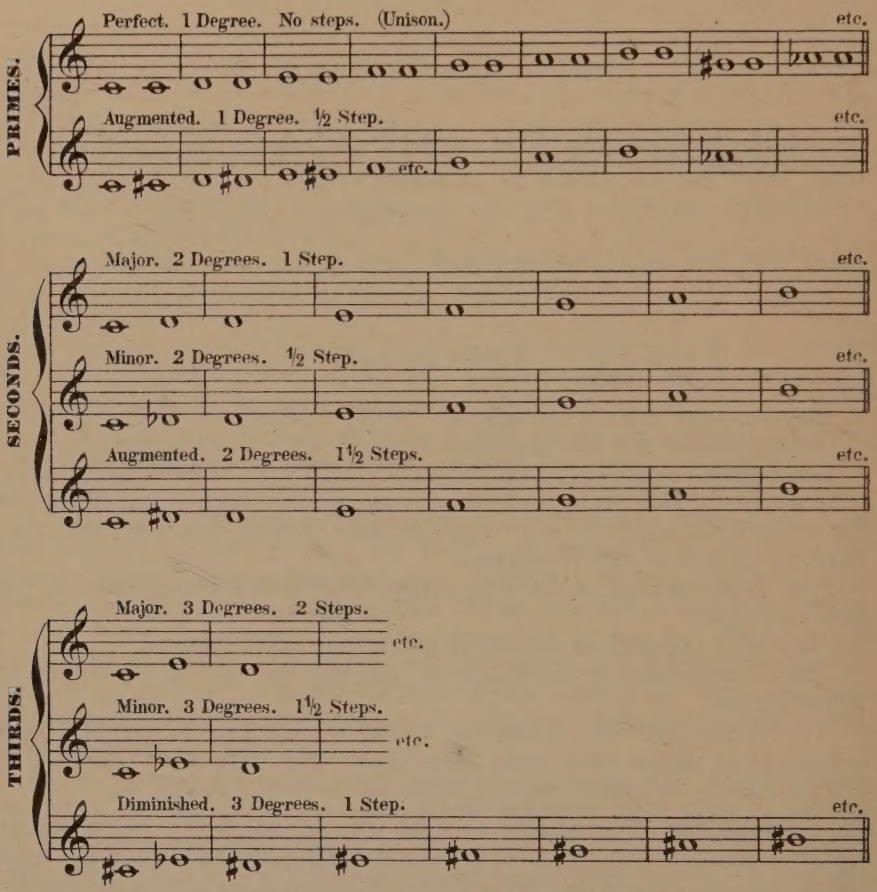


The subjoined table of intervals should be committed to memory and an example of each interval should be written above each of the following notes, C, D, E, F, G, A, B. If desired, one may write the same intervals above each of these notes sharped (C♯, D♯, etc.) or flatted (C♭, D♭, etc.) omitting all intervals requiring triple sharps or triple flats.

The table shows that intervals may contain the same number of *steps* (not *degrees*) and yet bear different names, as: — an augmented prime and a minor 2nd, each, contains a half step. Neither can be properly substituted for the other; and in writing intervals, the student must be careful, first, that each interval occupies the stated number of *degrees.* After that, the proper sharp, or flat, may be inserted that may be needed to make the correct number of *steps.*

*) By common consent, of two notes mentioned but *not written,* the first named is usually understood to be the lower, as: C to G means C up to G: G to C, G up to C.

Read the description of each interval just before writing it, and then lay out the work somewhat as follows: —



From E to F, and from B to C are but half steps: the other contiguous letters are a whole step apart.

TABLE OF INTERVALS.

A perfect prime occupies 1 degree and contains no step – unison.
An augmented prime occupies 1 degree and contains ½ step.

A major 2nd occupies 2 degrees and contains 1 step.
A minor 2nd occupies 2 degrees and contains ½ step.
An augmented 2nd occupies 2 degrees and contains 1½ steps.

A major 3rd occupies 3 degrees and contains 2 steps.
A minor 3rd occupies 3 degrees and contains 1½ steps.
A diminished 3rd occupies 3 degrees and contains 1 step.

A perfect 4th occupies 4 degrees and contains $2\frac{1}{2}$ steps.
A diminished or imperfect 4th occupies 4 deg. and contains 2 steps.
An augmented 4th occupies 4 degrees and contains 3 steps.

A perfect 5th occupies 5 degrees and contains $3\frac{1}{2}$ steps.
A diminished or imperfect 5th occupies 5 deg. and contains 3 steps.
An augmented 5th occupies 5 degrees and contains 4 steps.

A major 6th occupies 6 degrees and contains $4\frac{1}{2}$ steps.
A minor 6th occupies 6 degrees and contains 4 steps.
An augmented 6th occupies 6 degrees and contains 5 steps.

A major 7th occupies 7 degrees and contains $5\frac{1}{2}$ steps.
A minor 7th occupies 7 degrees and contains 5 steps.
A diminished 7th occupies 7 degrees and contains $4\frac{1}{2}$ steps.

A perfect 8th occupies 8 degrees and contains 6 steps.
A diminished or imperfect 8th occupies 8 deg. and contains $5\frac{1}{2}$ steps.
An augmented 8th occupies 8 degrees and contains $6\frac{1}{2}$ steps.

A major 9th occupies 9 degrees and contains 7 steps.
A minor 9th occupies 9 degrees and contains $6\frac{1}{2}$ steps.

A *chromatic* semitone has both its notes written on the same degree (an augmented prime — f to f♯): a *diatonic* semitone occupies contiguous degrees (a minor second — f to g♭).

An enharmonic interval is different notations of the same pitch (on a keyed instrument) as: C♯ to D♭, etc.

The intervals are otherwise divided into consonances and dissonances and the former are also subdivided as follows: —

Perfect Consonances.	Perfect Primes. Perfect Fourths. Perfect Fifths. Perfect Octaves.	Imperfect Consonances.	Major Thirds. Major Sixths. Minor Thirds. Minor Sixths.	Dissonances.	All of the remaining intervals.

The student should have frequent practice in naming any intervals in published music, reckoning as well from any note to a succeeding lower note as to one higher, and exercising the ear alone, as well as the eye, in recognizing them.

An interval is *inverted* when by transposing its upper note an octave lower, or its lower an octave higher, they exchange their relative positions, the upper note becoming the lower and *vice versa.*

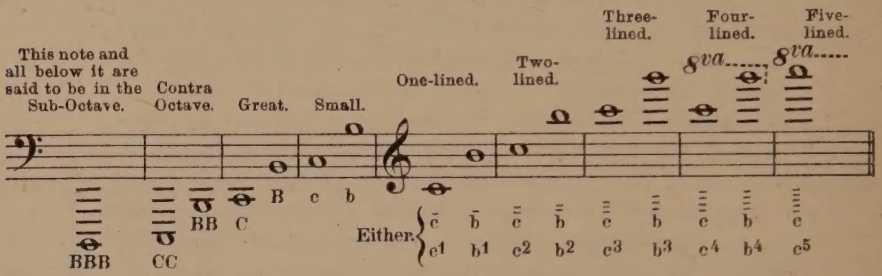
The interval resulting from inversion is readily found by subtracting the original interval from nine, thus: — a third inverted becomes (9—3=6) a sixth, etc.

Inverted primes become octaves.
Inverted octaves become primes.
Inverted seconds become sevenths.
Inverted sevenths become seconds.
Inverted thirds become sixths.
Inverted sixths become thirds.
Inverted fourths become fifths.
Inverted fifths become fourths.

Major intervals inverted become minor.
Minor intervals inverted become major.
Diminished (or imperfect) intervals inverted become augmented.
Augmented intervals inverted become diminished (or imperfect).
Perfect intervals inverted remain perfect.

NAMES OF THE OCTAVES.

For convenience in speaking, or writing, each octave has its distinguishing name, beginning on each C. The lowest C in music (often known as "a 32 foot tone") is called Sub-octave C, or Sub-C, and each letter above has the same prefix until the next C is reached, which is called Contra C, and this octave, Contra octave. Beginning on each C, the octaves succeed each other upward as follows, the usual designations of each octave being given below it.

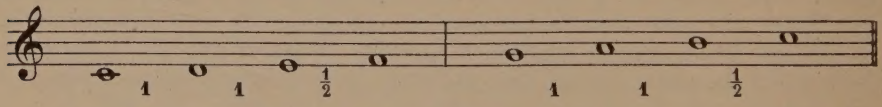


The use of the letters, alone, indicates quite as plainly as the notes, which octave is intended. Frequent exercises on blackboard or paper should render these octaves familiar.

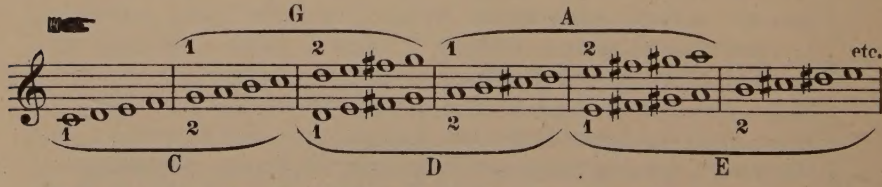
LESSON 2.

SCALES.

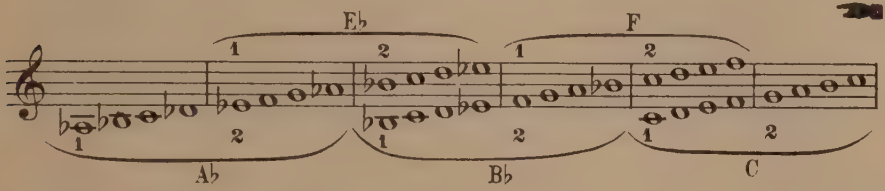
The Greek tetrachord was a diatonic passage of four notes comprising, from the lowest to the highest, a fourth; and the Lydian tetrachord, one of the Greek tetrachords, presented an upward succession of two whole steps and one half step. The modern diatonic major scale consists of two Lydian tetrachords combined.



As the two halves of our major scale have quite the same intervals, the second half of one scale could readily be used as the first half of another, or the reverse; which suggests the most natural order of scale transposition. By writing the second half of each scale as the first half of a new one, we find ourselves beginning each new scale on the fifth degree of the preceding and obliged each time to introduce one new sharp to preserve the same succession of intervals. Read from left to right.



This may properly go on till we cease to get an *audibly* new scale, when, although the notation may be new, no real variety of effect will be obtained.

Likewise, in using the first half of one scale as the second half of another (beginning at the *right* hand of the following example) we shall necessarily begin each new scale on the note which was the fourth of the former and be obliged to introduce one new flat with each new scale. Read from right to left.

These two forms will be found, on their twelfth transposition, to give the audible effect of C major, thus returning to their original starting-point. In addition to this, each series will be found to duplicate the other — six sharps producing an audible equivalent for six flats; three flats, for nine sharps, etc. For the sake of simplicity, therefore, keys having a smaller number of flats are usually substituted for those having many sharps, and *vice versa*. The two systems of transposing by fifths and by fourths appear below, the last circle giving the result of simplifying and uniting both.

C
12
F1 D♭♭ 11A♭♭
B♭2 10E♭♭
E♭3 By 4ths, using flats. 9B♭♭
A♭4 8F♭
D♭5 7C♭
G♭6

C
12
E♯11 B♯ 1G
A♯10 2D
D♯9 By 5ths, using sharps. 3A
G♯8 4E
C♯7 5B
F♯6

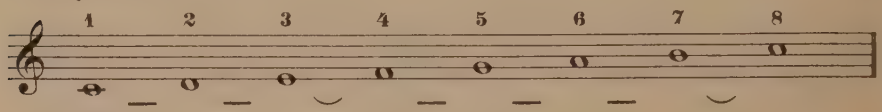
Those scales that are duplicates of each other are here grouped together.

C
F1 | 1G
B♭2 | 2D
E♭3 Flats. | Sharps. 3A
A♭4 | 4E
D♭5 C♯7
5B 7C♭
6 6
G♭ F♯

From the foregoing we deduce the statement that the major scale consists of intervals of major and minor seconds, the latter coming only between the third and fourth, and the seventh and eighth degrees of the scale, as shown below.

A — denotes a major 2nd; a ‿, a minor 2nd; and a +, an augmented 2nd (used in minor keys, later).

Major Scale of C.



Model for all major scales:

1 — 2 — 3 ‿ 4 — 5 — 6 — 7 ‿ 8.

Following the model of C major, the student should now write a major scale from each of the following notes, in this order: C, G, D, A, E, B, F♯, G♭, D♭, A♭, E♭, B♭, F, C♯ and C♭. The signatures are not yet to be written, but a sharp or flat should stand before each note requiring it.

Commit to memory the number of sharps or flats in each key and the particular notes that they affect, *in their proper order.*

The names of the degrees of any major or minor scale are, in an ascending order: 1, Tonic; 2, Super-tonic; 3, Mediant; 4, Sub-dominant; 5, Dominant; 6, Sub-mediant; 7, Leading-tone; 8, Tonic. These should be applied in every key.

MINOR SCALES.

Keys are said to be related when they contain many notes alike. Every major key has a "relative (or related) minor," founded a minor third below the major (on the third note of the descending major scale) and *both keys have the same signature.* The relative minor of each major key and the relative major of each minor should now be perfectly learned, with the signature of each, as shown below.

Relative Major Keys.— C, G, D, A, E, B, F♯, C♯, C♭, G♭, D♭, A♭, E♭, B♭, F.

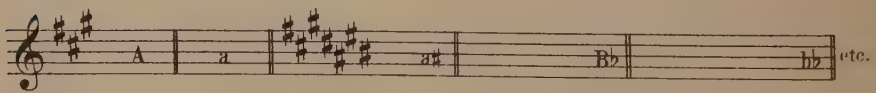
Relative Minor Keys.— a, e, b, f♯, c♯, g♯, d♯, a♯, a♭, e♭, b♭, f, c, g, d.

Signatures. — Blank, 1, 2, 3, 4, 5, 6, 7, 7, 6, 5, 4, 3, 2, 1.

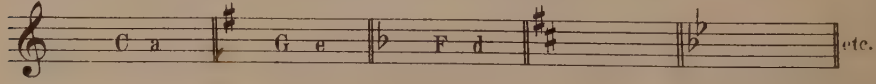
Sharps. Flats.

Copy the following letters on a staff and just *before* each, write the signature of the key it represents — capitals denoting major keys and small letters, minor: — A, a, a♯, B♭, b♭, B, b, C♭, C, c, C♯, c♯, D♭, D, d, d♯, E♭, e♭, E, e, F, f, F♯, f♯, G♭, G, g, g♯, A♭, a♭.

The work may be laid out thus: —



Write now the signatures of one sharp, one flat, two sharps, two flats, three sharps, three flats, etc., to seven sharps and flats, inclusive, sharps and flats alternating, and just *after* each signature, write a capital showing its major key and a small letter showing its minor, beginning as follows: —

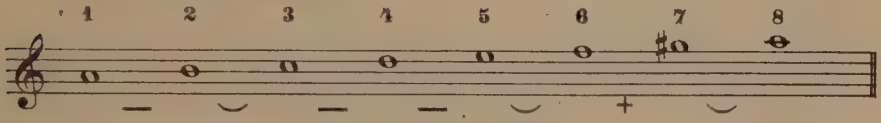


From the foregoing, it is evident that a key can be recognized by observing what sharps or flats actually occur in the signature and music. See Lesson 21.

The Harmonic Minor Scale has the signature of its relative major and its 7th degree is chromatically raised (with some few exceptions) in both ascending and descending.

Note. While the distinct individuality of the two notes of a chromatic semitone (C and C♯ or D♭ and D, etc.) is everywhere recognized, this phrase, "chromatically raised", seems necessary if one will avoid the greater length of any other equivalent expression of what is intended.

Harmonic Minor Scale of *a*.



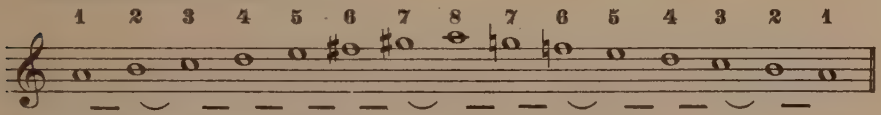
Model for all harmonic minor scales:

1 2 3 4 5 6 7 8.

Following this model, the harmonic minor scale should be written, beginning on the relative minor of each major scale and in the same order in which those were written, using now the signatures of the major. The sharps or flats in the signature should not be duplicated by accidentals.

Although not employed in this book until Modulation is reached, the student should write, in every minor key, the *Melodic Minor Scale,* which has its sixth and seventh degrees chromatically raised in ascending and restored to what the signature indicates, in descending.

Melodic Minor Scale of *a*.



Model for all melodic minor scales:

1 2 3 4 5 6 7 8 7 6 5 4 3 2 1.

The signatures may be written; and to restore any note to a single sharp, after the use of a double sharp, ♮ ♯ before the second note is most accurate.

Note. The "mixed minor scale" has the form of the melodic in ascending and of the harmonic in descending.

The Chromatic Scale, though progressing by half steps (semitones) and therefore always giving the same audible effect, is variously written, according to the key in which it occurs.

LESSON 3.

TRIADS.

A *triad* contains a root and two intervals, each reckoned from this root upward, a 3rd and a 5th. In four voiced harmony (or still fuller) any part of a triad may be doubled; the root most frequently and the 3rd most seldom. The 5th is often omitted — the root, or the 3rd, never.

The simplest way of forming a triad, irrespective of its character, is to write out the musical letters, thus: —

A B C D E F G A B C D E F G,

and then, taking any letter as 1, by numbering toward the right hand, those coming as 1, 3 and 5 will form a triad — the 8 being the octave of 1, the root. Afterward, triads thus formed may easily be written in notes on a staff.

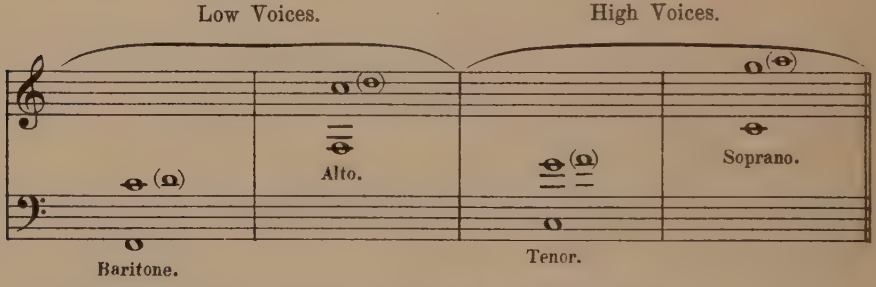
Analysis of Triads.

1. A root, minor 3rd and imperfect (or diminished) 5th form a diminished triad.
2. A root, minor 3rd and perfect 5th form a minor triad.
3. A root, major 3rd and perfect 5th form a major triad.
4. A root, major 3rd and augmented 5th form an augmented triad.

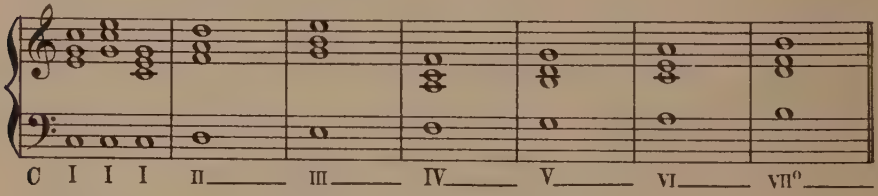
Roman numerals beneath chords show upon which degrees of the scale the triads are founded, counting upward. Large numerals denote major triads; small numerals, minor. This sign ^{0} at the right of a small numeral denotes a diminished triad; and this $^{+}$ at the right of a large numeral, an augmented triad.

In four-voiced harmony the triad is in the first position with some octave of its root in the soprano; in the second position with its 3rd in the soprano; and in the third position with its 5th in the soprano. The *position* of a chord, therefore, refers to the interval that is in the highest voice.

The following, though less than the compass of solo voices, are the limits within which the exercises of this book should be written.



Below are the four-voiced triads in the key of C major, the first bar giving the three positions. This form should be copied, and the second and third positions of the other triads filled out by the student, each of the four voices being kept within its own compass. Each chord represents the usual quartette, bass (baritone), tenor, alto and soprano.



From the foregoing may be deduced this summary: —

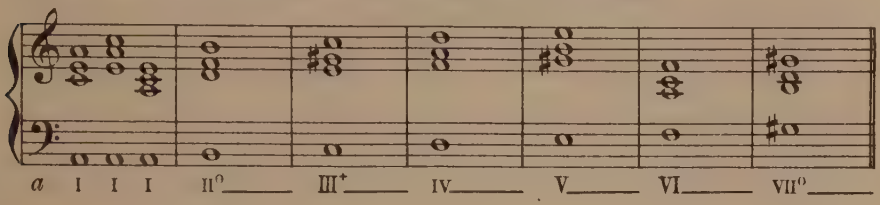
The Triads of any Major Key.

Tonic, sub-dominant and dominant, major; marked I IV V.
Super-tonic, mediant and sub-mediant, minor; marked II III VI.
Leading-tone, diminished; marked VII°.
The same form should be written in the keys of G and F major, or in all

major keys, but without the signature, the proper sharps or flats being placed where they are needed.

The triads in three positions on each degree of the minor scale, with their appropriate Roman numerals, should now be written in the keys of *a, e* and *d* minor, or in all minor keys, using their signatures.

The notes of the harmonic minor scale are to be used.*



The Triads of any Minor Key.

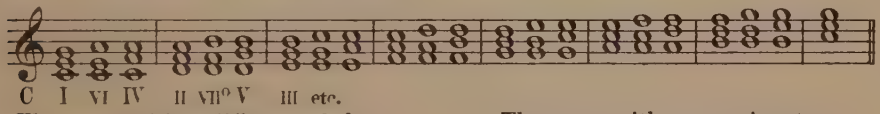
Tonic and sub-dominant, minor; marked I IV.

Super-tonic and leading-tone, diminished; marked II° VII°.

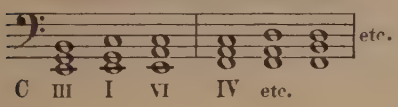
Mediant, augmented; marked III+.

Dominant and sub-mediant, major; marked V VI.

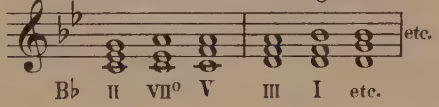
The following, copied many times, each time with a different clef, or signature, or both, may be used for the application of Roman numerals and also in naming the key and the degrees of the scale — tonic, dominant, etc., in connection with the *roots* of these chords.



The same with a different clef.



The same with a new signature.



LESSON 4.

CONNECTION OF TRIADS IN MAJOR KEYS.

Parallel motion arises between any two voices moving simultaneously upward or downward, whether the same number of degrees, or otherwise.

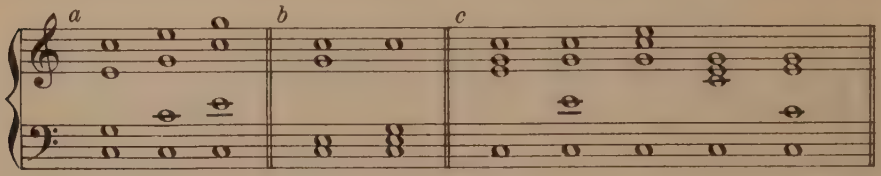
Contrary motion is produced by any two voices moving in opposite directions, either receding or approaching.

Oblique motion results if, of two voices, one remains on the same degree, while the other ascends or descends.

Open, or dispersed, harmony requires the voices to be so separated that by transposing the soprano one octave lower it would come between the alto and tenor; and also by transposing the tenor one octave higher it would come between the alto and soprano, as at *a*. If only one of such transpositions is possible, the harmony is *partially open,* as at *b*. If neither is possible, or in other words, if the

* See Lesson 21, Rule 6, for an exceptional use of the notes of the *descending* melodic minor scale.

upper three voices are as near each other as they can be under a certain soprano, the harmony is *close*, as at *c*. Any two voices lying next each other may often sing the same note; but, in elementary harmony, a lower voice should not sing above a higher, or the reverse.



The first two chords at *c* are identically the same, save in notation: so of the last two.

Because of greater facility in its treatment, close harmony is to be employed in these lessons until otherwise indicated, with the tenor on the upper staff, to leave room for the Arabic numerals hereafter introduced.

Rules for Connecting Chords.
(Refer to the illustrations below.)

1. When an 8, or no numeral, stands over the *first* bass note of an exercise, the chord *over that note* must have the octave of its root in the soprano. A 3 over this *first* note requires its 3rd to be in the soprano; and a 5, its 5th. This rule applies to the *first chord only,* in each exercise.

2. If consecutive chords contain any notes alike, these notes must be *kept in the same voices* in both chords and tied.

Note. The tying of notes reminds the student which are the connecting notes; but these should be struck again when the corrected exercises are afterward played on a pianoforte.

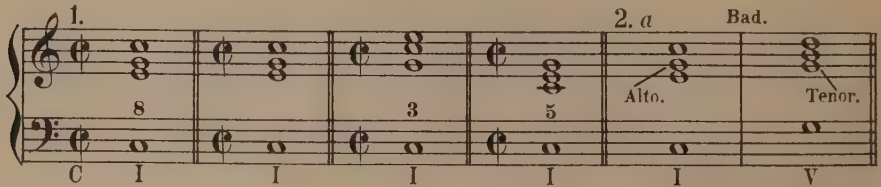
3. If there be no notes alike in consecutive chords, and the chords have their roots in the bass, the upper three voices must move in contrary direction to the bass, to the nearest position of the chord to which they go (that is, moving as little as possible).

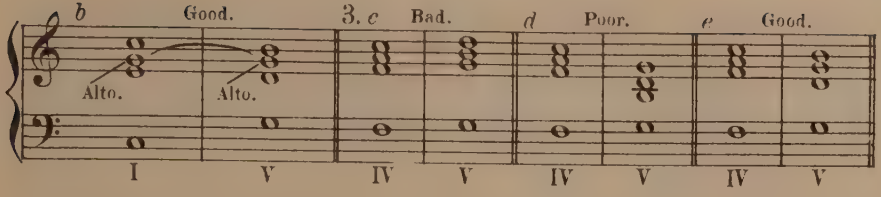
4. Avoid consecutive fifths, octaves, or unisons *between the same voices,* in either parallel or contrary motion; but the same fifth, or octave, may properly be repeated.

Note. The progression of two voices from a unison to an octave, or the reverse, is a violation of Rule 4, save as explained in the lesson on Chants. For a strong, closing cadence, consecutive octaves *in contrary motion* are sometimes admissible; but not consecutive fifths.

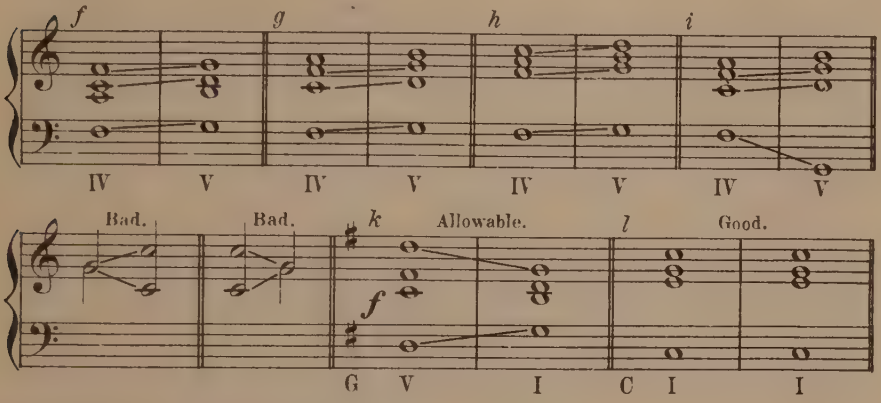
5. Let no voice progress any augmented interval, except an augmented prime. See Lesson 5.

☞ Whenever rules conflict, follow the one last given. The numerals over the illustrations refer to the corresponding rule.





4. Consecutive 5ths and 8ths — all bad. . . . . .



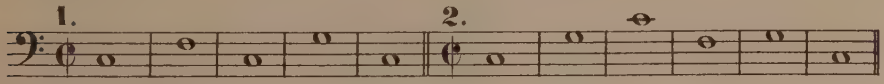
Rule 5 illustrated in Lesson 5.

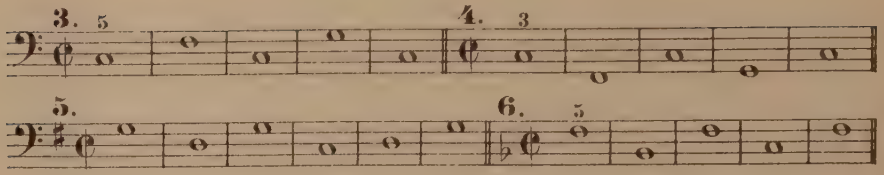
Explanation of the foregoing illustrations.

At *a*, the G having come first in the alto should not have gone into the tenor, but should have been kept in the same voice that first gave it, as at *b*. At *c*, the chords having no notes to tie should have moved downward in contrary motion to the bass, as at *e*. At *d* they move in contrary motion, but too far. At *f* the bass and soprano are an octave apart, twice in succession; so of the bass and alto at *g*; and of the bass and tenor at *h*. At *f* the bass and alto present consecutive fifths, as do the bass and tenor at *g*, the bass and soprano at *h*, and the tenor and soprano at *h*. At *j*, the consecutive octaves between bass and alto, as well as consecutive fifths between bass and tenor, are wrong, although coming in contrary motion. A similar case of consecutive octaves in *contrary* motion, at *k*, is allowable only as a closing form. At *l* the *repeated* octave between bass and soprano and the *repeated* fifth between bass and alto are correct.

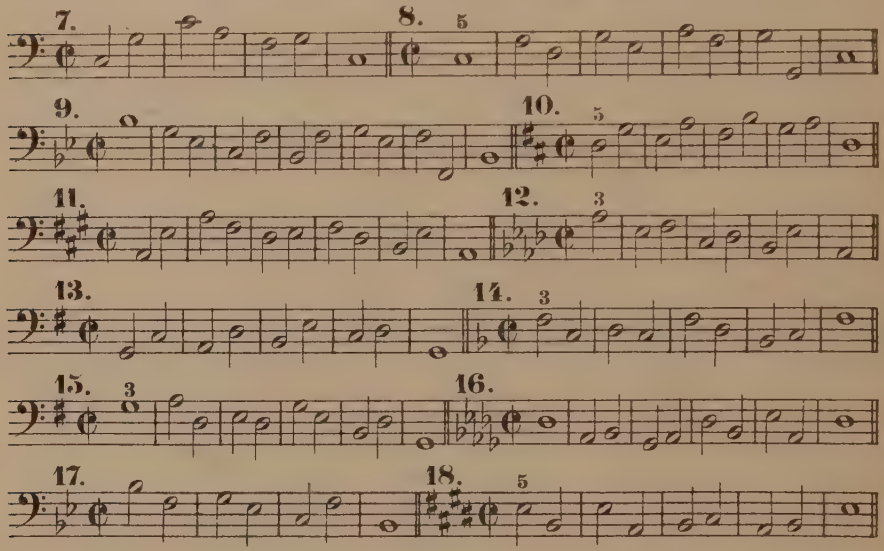
The student should now copy the subjoined basses, over which are to be written the proper triads in accordance with the foregoing rules. A capital, or a small letter, showing respectively the major or minor key of each exercise, must stand at its beginning; and a Roman numeral beneath each chord.

The keyboard should not be referred to in writing these lessons, but each exercise should be played many times *after being corrected*. See remarks in Lesson 43.





The foregoing present only major triads. The ear experiences a relief from monotony by the introduction of minor triads, though all in the major key.

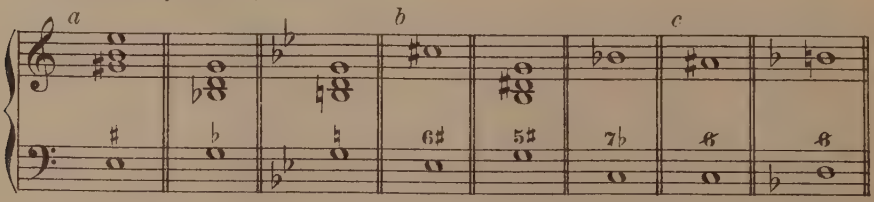


Should further practice like the preceding be desired before going on to Lesson 5, the student can use the *Supplementary Exercises to the Elements of Harmony,* by the author of this book.

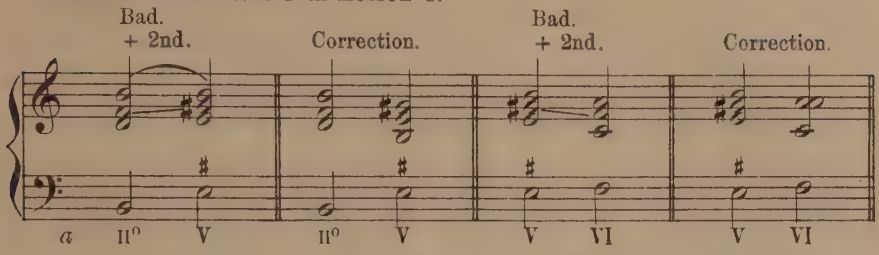
LESSON 5.

CONNECTION OF TRIADS IN MINOR KEYS.

When any accidental (chromatic sign) with no numeral *by its side,* stands over a bass note, it shows that the same sign should be written before the 3rd above the bass, as at *a:* with any numeral *by its side,* the interval corresponding to that numeral, reckoned from the bass note, should be similarly affected, as at *b;* and an oblique line through any numeral requires the indicated interval to be chromatically raised, as at *c.*



Illustrations of Rule 5 in Lesson 4.



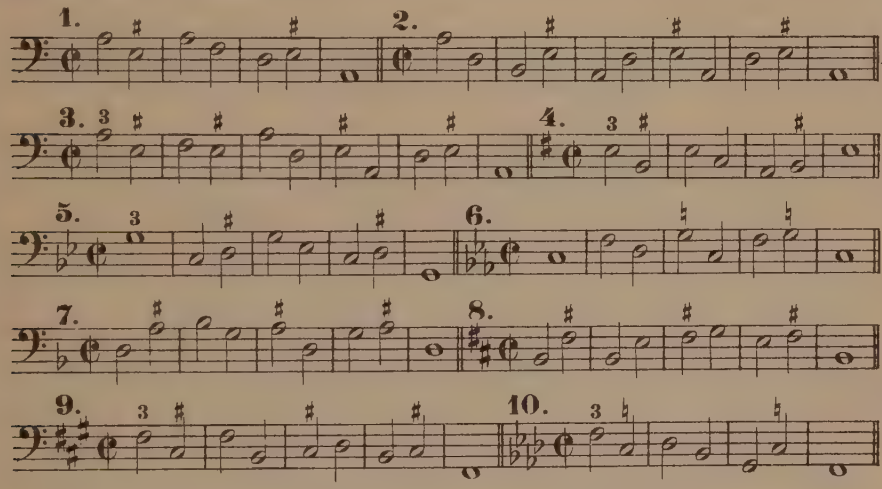
In the first measure, the alto progresses an augmented 2nd, from F to G♯, which must be avoided, even though, as in the next bar, the B is not kept in the same voice.*

In the third measure, the alto again moves an augmented 2nd, from G♯ to F; the fault being avoided in the fourth measure by letting the alto go up to A, thus as an exception doubling the 3rd of the last chord. Hence, observe the following

Rule.

In minor keys, the succession of the chords V VI, or VI V, causes the 3rd to be doubled in VI.

Harmonize the following, according to the five rules and the remark that follows them in Lesson 4.



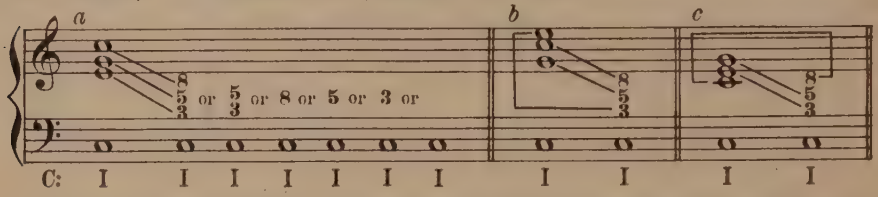
LESSON 6.

INVERSION OF TRIADS.

Any chord may be represented either by notes, or by a single bass note with certain numerals over it, corresponding to the intervals formed above it by each note of the chord. When a chord is represented in this latter way, the Arabic

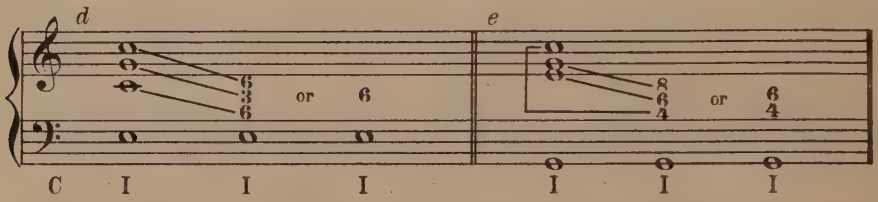
* Although these forbidden augmented intervals occur in the vocal works of the best writers, they are somewhat unmelodic, though not unmusical, and are consequently to be avoided until familiarity with the rules of composition will enable one to employ them with good effect.

numerals are obtained by counting from the bass note upward to each note of the chord. A triad is denoted by either $\frac{8}{5}$, $\frac{5}{3}$, 8, 5, or 3, over a bass note, or by a bass note with nothing over it, such a note being regarded as the root. See *a*. It is customary to place the largest numerals the highest, whether the intervals come in this, or a different order, as shown at *b* and *c*.



A chord is *inverted* when any note *not its root* is in the bass. When the 3rd of a triad is in the bass the chord is called the *first inversion,* or a *chord of the sixth* — see *d;* and the fifth of a triad being in the bass, it is called the *second inversion,* or a *chord of the sixth and fourth* (more commonly termed a *six-four chord*) — see *e.*

☞ Roman numerals show the *roots* of triads, whatever interval may be in the bass.



These Arabic numerals, like all others, are found by counting from the bass note up to each note of the chord over it.

6 shows the bass to be the 3rd of a triad — the first inversion.

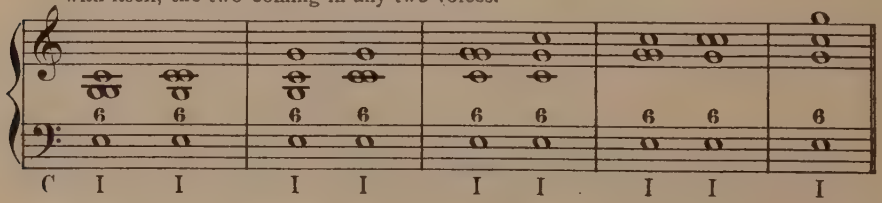
$\frac{6}{4}$ shows the bass to be the 5th of a triad — the second inversion.

The octave of a bass note under 6 somewhat rarely appears in the chord above: in other words, the 3rd is not usually doubled.

The octave of a bass note under $\frac{6}{4}$ usually appears in the chord above: in other words, $\frac{6}{4}$ chords usually double their 5th.

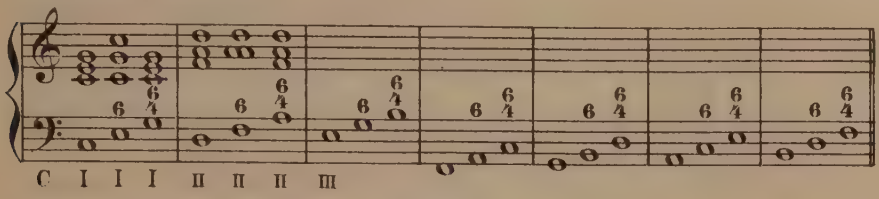
Nine correct ways of writing the first inversion of a triad without doubling its 3rd are here shown.

Note. By doubling a 3rd is meant also the writing of any octave of the 3rd in the same chord with itself, the two coming in any two voices.

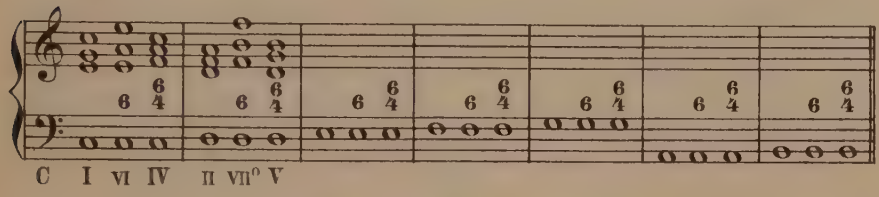


The 3rd is not to be doubled in the two following exercises. Each chord is to be regarded as though standing alone and consequently has no connection with any other. Chords of the 6th may be written in either of the above nine ways. A Roman numeral must stand under each chord, with every proper variety in

the position of the various chords. The proper chords are to be written over the following bass notes.



At the fourth bar above, the bass is lower for convenience in writing.



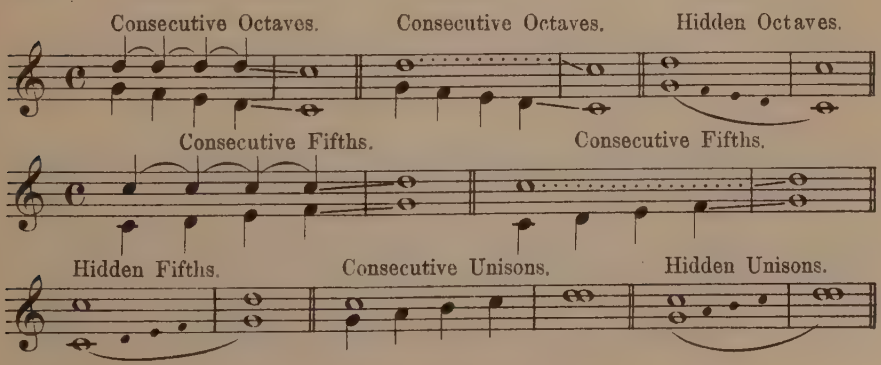
Frequent exercises in playing and naming such chords are indispensable to practical results.

TRANSPOSITION.

As already shown in the lessons on scales and triads, any exercise is transposed when all its notes are written a certain distance higher or lower than at first. If any be higher, all must be higher: if lower, all must be lower — not some higher and others lower. To illustrate this and to review the former lessons, the student should now transpose the basses of Lesson 4, to other major keys, some, one degree higher and others, one degree lower, using the proper signatures, and harmonize them *without comparing them with the corrected lesson.*

HIDDEN OCTAVES, FIFTHS AND UNISONS.

When any two voices, either more or less than an octave apart, move in *parallel* motion to an octave, they pass over notes which, if written, would form consecutive octaves. Such a progression forms hidden (covered, or concealed) octaves. The same principle applies in the explanation of hidden fifths and hidden unisons.



Of the four voices, the bass and soprano, from their relative positions, are termed the *outer* voices; and the tenor and alto, the *inner* or *middle* voices. Hidden 8ths or 5ths are more noticeable and therefore generally worse, when occurring in the outer voices. It is however almost impossible to give directions for their avoidance more definite than the following: —

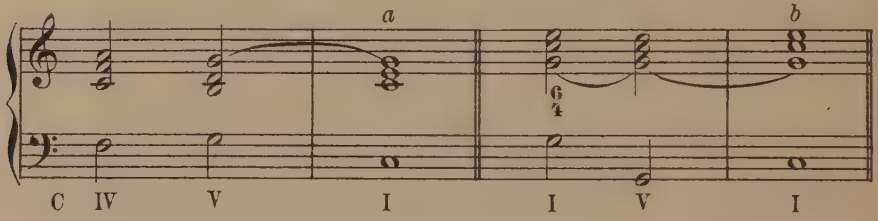
Rule. Avoid hidden 8ths or 5ths, especially in two outer voices, unless by so doing an angular or otherwise unnatural movement of some voice is produced; in which case they are to be allowed.

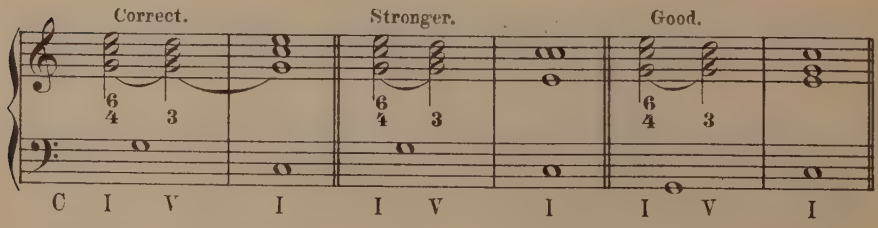
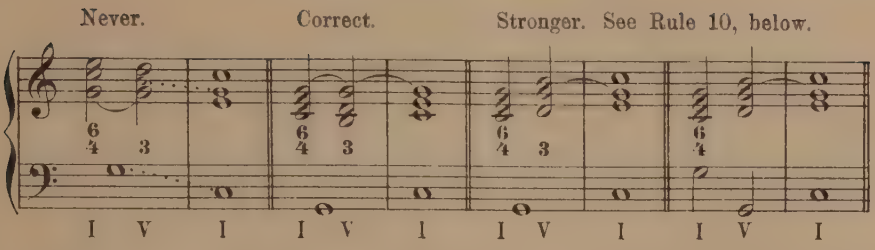
Hidden unisons are almost never proper except occasionally between bass and tenor. All three of these progressions are worse if both the voices between which they occur, skip; but hidden 8ths and hidden 5ths resulting from only changing the position of *the same chord,* even by skips, are faultless. See also the *Rule against Hidden Octaves;* in Lesson 17.

The student should not be too anxious over hidden 8ths, etc., as a general observance of the previous rules will in most cases insure a correct writing of simple exercises. Care should be taken not to confound *hidden* with *consecutive* 8ths and 5ths — the latter never being allowable in elementary exercises.

LESSON 7.

EXERCISES INTRODUCING INVERTED TRIADS.

A strict following of the previous rules will sometimes produce a close like either of the following examples.

The soprano ending on the tonic leaves the final impression of a satisfactory close: ending on the dominant, as at *a*, the effect is somewhat expectant or unfinished: ending on the mediant, as at *b*, the effect is rather plaintive. While neither is invariably to be sought, the close on the tonic will usually be the best; and to obtain this, the student may employ the following

Forms of Ending.



Many theorists apply the rule of never doubling the 3rd in a major triad, while sometimes allowing it in a minor; and it cannot be denied that any chord taken alone, affords good reason for this. But in chord progressions two things are to be sought: to produce good chords and to make each voice melodious, or at least to cause it to move naturally. The rules of this system of instruction aim at this twofold result. Were we never to double a 3rd, it would be impossible to preserve four parts either melodious or even free from unnatural progressions. To aid us therefore we adopt the following

Rules for Inverted Triads.

1. The 3rd is not to be doubled except to make the voices move more melodiously, or to avoid needless repetitions in any voice.

2. The leading-tone is rarely to be doubled except in sequences or modulations. See Sequences in Lesson 9.

Note. The *triad* of the leading-tone appears most frequently with its 3rd in the bass and also in some other voice.

3. Contrary motion to the bass is usually better than parallel, where either could easily be written.

4. Avoid unisons twice in succession between either the same or different voices.

5. In consecutive chords of the 6th, when the bass moves diatonically, if the upper voices move in *contrary* direction to the bass the 3rd may well be doubled in *every* chord.

6. In such cases as in Rule 5, if the upper voices (or most of them) move *parallel* with the bass the 3rd must be doubled in *alternate* chords.

7. In the midst of an exercise the position of a chord is not indicated by either 8, 5 or 3; these numerals showing only that the bass is the *root of a triad*.

8. $\frac{6}{4}\ _3$ over the same bass note shows it to be first the 5th of one triad and afterward the root of another. A ♯ in place of the 3 has the same meaning as the 3 and also requires the 3rd above the bass to be sharped.

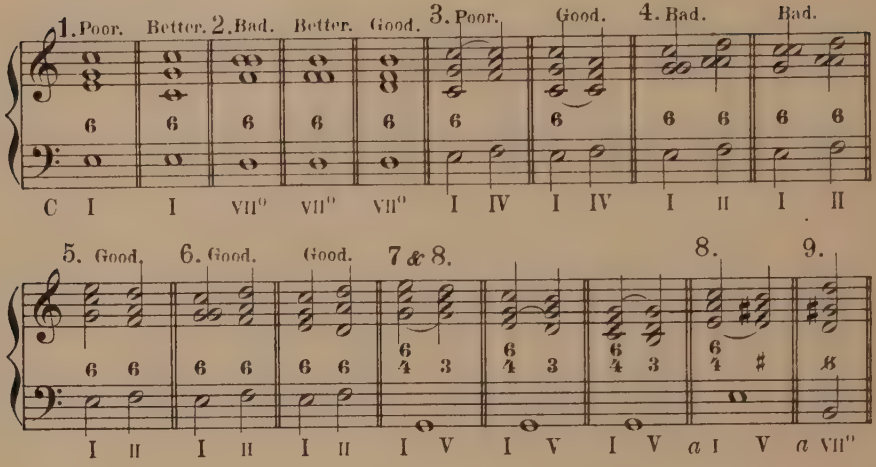
9. An oblique line through a 6 (6̸) does not change its former meaning. It still shows, when no other numeral is below it, that the bass is the 3rd of a triad and that the 6th above the bass is to be chromatically raised.

10. If any one voice be sustained, the others may sometimes skip, either to another position of the same chord or to another chord. The same movement is allowable if the bass moves an octave.

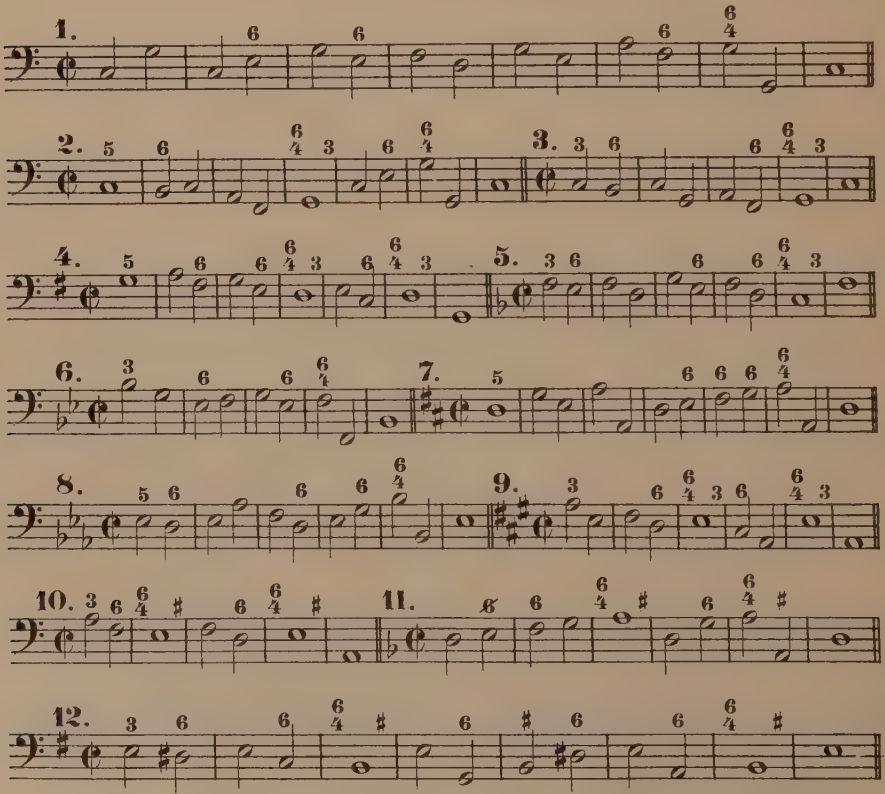
Note. It sometimes happens that one may write either the unison on one note or the octave of another in a chord of the 6th. The latter is fuller; but the leading of single voices or some other consideration often renders the unison preferable. Experience alone will guide one in such cases.

☞ A Roman numeral must show the *root* of each chord.

Illustrations of Rules.


1. Poor. Better. 2. Bad. Better. Good. 3. Poor. Good. 4. Bad. Bad.
C I I VII° VII° VII° I IV I IV I II I II
5. Good. 6. Good. Good. 7 & 8. 8. 9.
I II I II I II I V I V I V a I V a VII°

After copying the following exercises, the student should verify his accuracy by comparing his copy with the originals, before attempting to harmonize them.



LESSON 8.

CHORDS OF THE SEVENTH.

A full chord of the 7th contains a root, 3rd, 5th and 7th. See *a*. As the 7th is a dissonant interval it must be followed by a consonance, called its *resolution;* and this requires a regular progression of all the accompanying voices, called the *resolution of the chord of the 7th.*

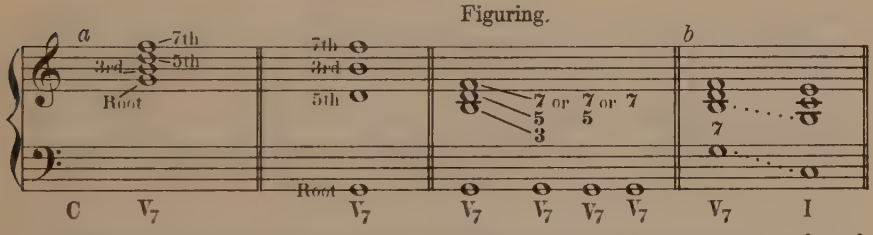
Rules for the Regular Resolution of Chords of the Seventh.*

1. When the root is in the bass, it ascends a 4th or descends a 5th: when in any other voice, it is held over into the following chord.

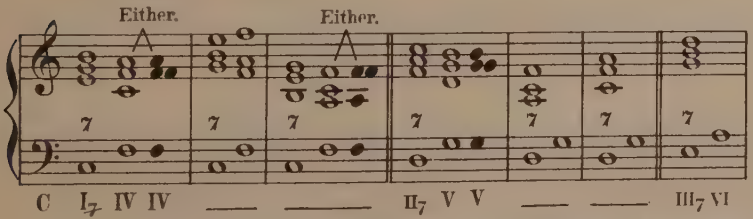
2. When the 3rd is in an outer voice, it must ascend one degree: when in a middle voice, it may either ascend one degree, or if the bass does not *descend* to the *root* of the resolution, the 3rd may ascend one degree or descend two degrees. If the bass *descends* to the *root,* the 3rd must ascend one, to avoid bad hidden fifths, shown at *b*.

3. The fifth usually descends one degree but sometimes ascends one, to form a smoother progression of some voice.

4. The 7th always descends one degree.

Note. For the more usual progression of a 7th chord on the leading-tone, see Lesson 11. The 7 *over* the bass produces the chord of the 7th: the 7 with the Roman numeral *under* the bass is merely the name of the chord.

Chords of the 7th in their various positions, with the resolutions of each, should now be written on each degree of the scale, first with the root of each 7th chord ascending a 4th, then with the root descending a 5th (to apply both conditions of Rule 2) in forms similar to the following. A major 7th may be marked *beneath* the bass, with an oblique line through the numeral, thus: — 7 — a minor 7th, by the numeral only — and a diminished 7th thus: — 7^0, the triads being marked by Roman numerals as before.

Root ascending a fourth.

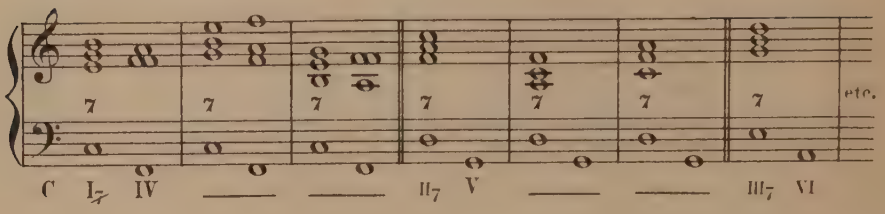


etc., on each degree of the scale.

In one or two measures, it will not be practicable to keep each part within the vocal compass already adopted; but this should be done, wherever possible.

* Irregular resolutions are given in Lesson 17.

Root descending a fifth.



The basses of Lesson 5 should now be transposed and re-written, keeping them in minor keys and using the signatures and accidentals belonging to the keys newly selected.

LESSON 9.

EXERCISES INTRODUCING CHORDS OF THE DOMINANT SEVENTH.

If the student will henceforth invariably speak of the seventh of the scale as the *leading-tone* and reserve the term *seventh* exclusively for the seventh of a chord, much needless confusion will be avoided.

Rules for Chords of the Seventh.

1. In chords of the 7th, the 5th is often omitted and the root doubled.

2. Consecutive 5ths are allowable when an imperfect (diminished) 5th follows a perfect, *but not the reverse* (see one exception in Lesson 10 at *c*); and consecutive imperfect 5ths are correct.

3. A voice should not *skip downward* to the 7th of a chord from different harmony: it may move one degree downward, and it may sometimes skip upward to the *dominant* 7th.

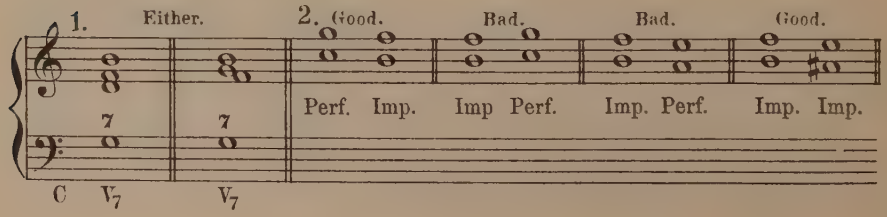
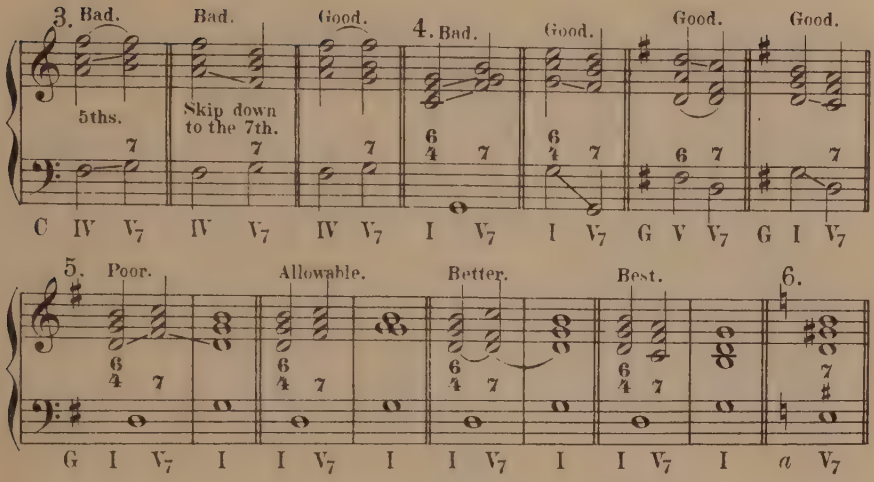
4. Parallel motion to the root and 7th of a chord is seldom good, and usually worse when convergent than when divergent.

5. A voice should rarely sing consecutively (in this order) the dominant, leading-tone and dominant, especially when the leading-tone comes on the unaccented part of the bar.

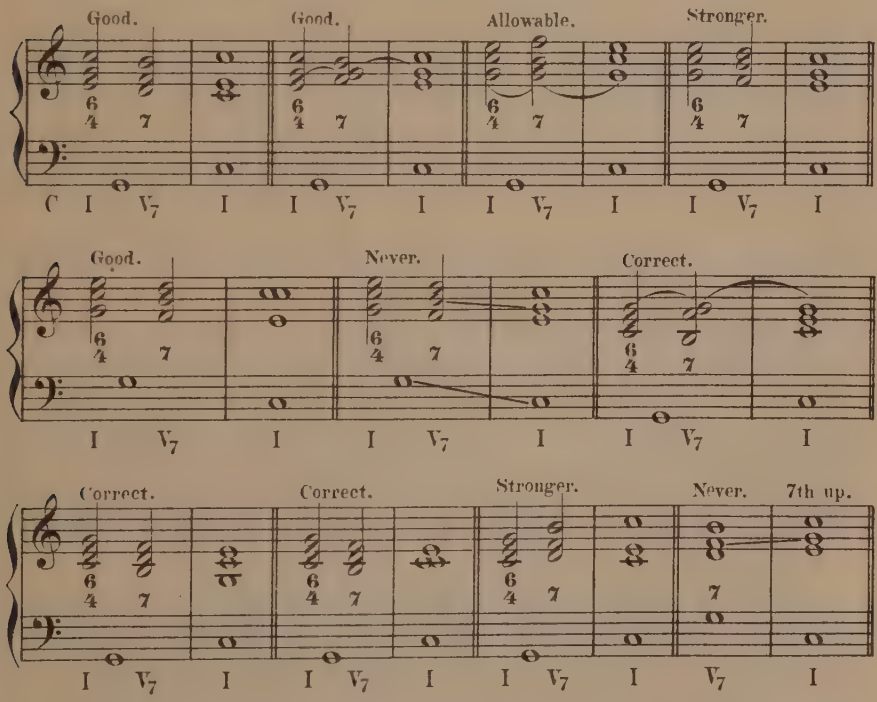
Note. The leading-tone usually ascends when approached from below, especially in the soprano; and the sub-dominant usually descends when approached from above.

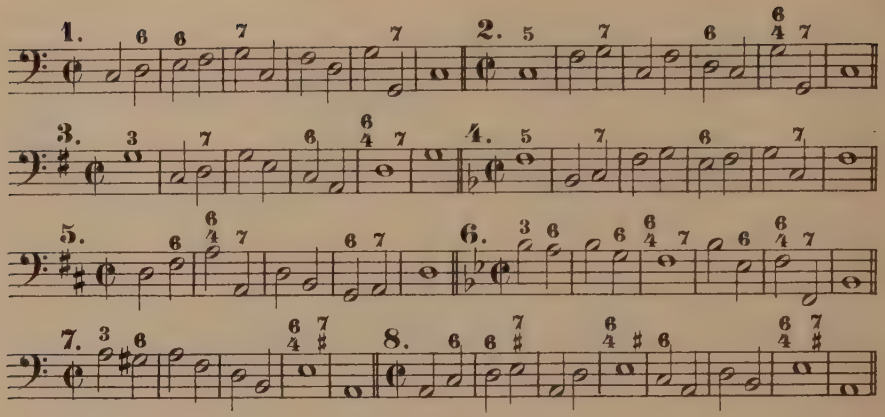
6. An accidental *beneath* a 7 should affect only the 3rd above the bass.

Illustrations of Rules.



The chord of the dominant 7th, the only one used till Lesson 11, consists of the fifth, seventh, second and fourth degrees of any major or minor key.

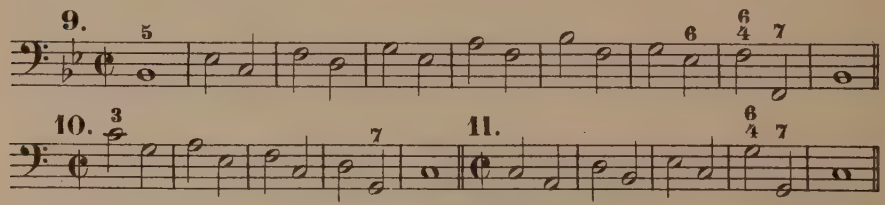
Forms of Ending.

The above rules, with those in previous lessons, should now be applied in harmonizing the following exercises. Continue to use the Roman numerals *throughout the book*, till otherwise directed.

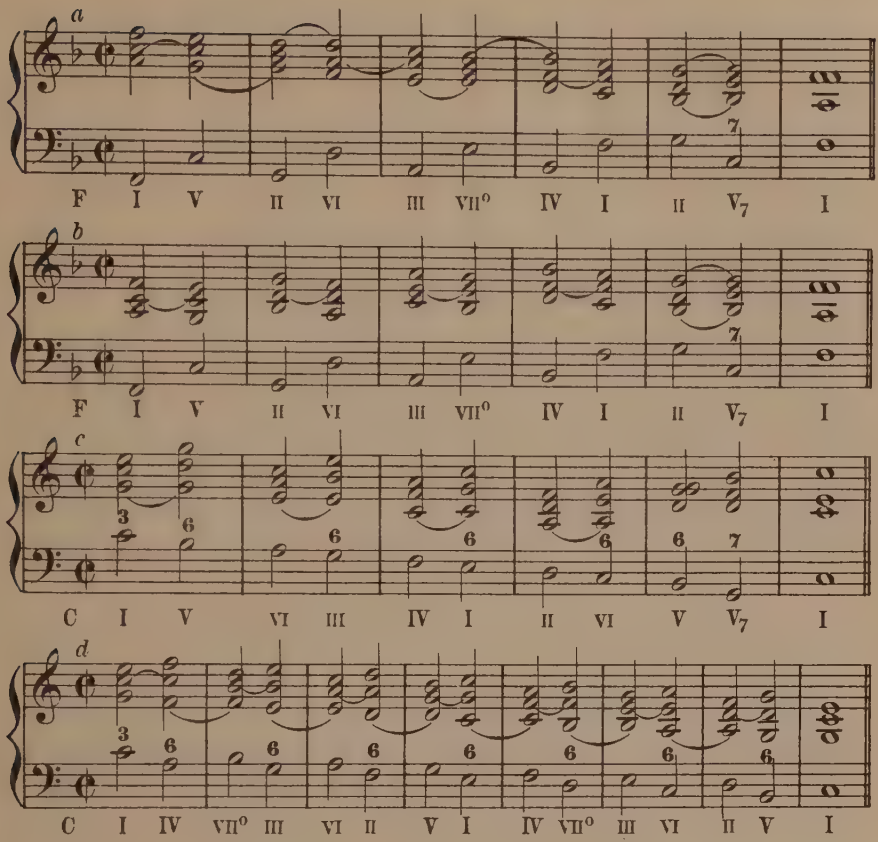


SEQUENCES.

A *sequence* is a regular and continuous transposition of any recognizable form, melodic or harmonic, consisting of the form itself and at least two transpositions of the same. A *regular* transposition must progress uninterruptedly in the *same direction* and each time the *same number of degrees.* The differences between major and minor intervals are not to be regarded in this connection. Perfect examples of sequences occur in Lesson 4, exercises 8, 10 and 13, though the sequences extend through but a part of each exercise. In the fifth bar of exercise 9, below, and in the second of exercise 11, it will be found necessary to double the leading-tone. (Refer to Rule 2 in Lesson 7.) The regularity of the sequence being more strongly felt than the melodic tendency of any one note, the leading-tone here loses its distinguishing characteristic and the effect is not unpleasant.

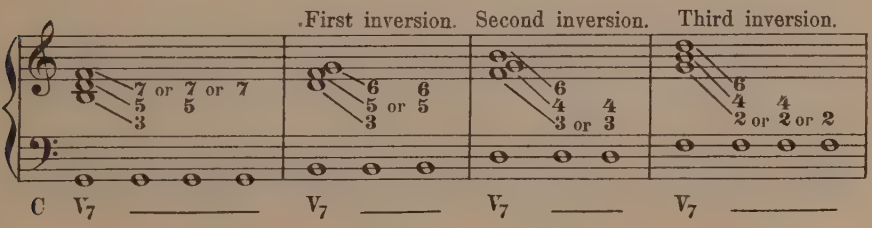
No exception to the usual rules for connecting chords is to be made in the three following exercises.



Sometimes in order to preserve a sequence in all the voices, the rule for keeping the same notes in the same voices must be laid aside. At *a,* applying the usual rules we find the sequence in the bass overwhelmed by irregular movement in the other parts. But in simple harmony, a sequence in one voice seems to require, though not the same movement, yet one equally regular and symmetrical in the other voices. This being written as at *b,* the sequence is preserved. At *c* also is shown an exceptional form of writing, in order to form a perfect sequence, while that at *d* comes naturally.

LESSON 10.

INVERSIONS OF DOMINANT SEVENTH CHORDS.

The Arabic numerals are always derived in the same way — by writing the chord as we wish it, then counting from the bass to each note above. These numerals are arbitrary signs and show that the corresponding intervals must be written, reckoning from the bass note, whatever interval of the chord that note may be.



$\frac{7}{5}_{3}$ or $\frac{7}{5}$ or 7 denotes a chord of the 7th with its root in the bass.

$\frac{6}{5}_{3}$ or $\frac{6}{5}$ denotes a chord of the 7th with its 3rd in the bass.

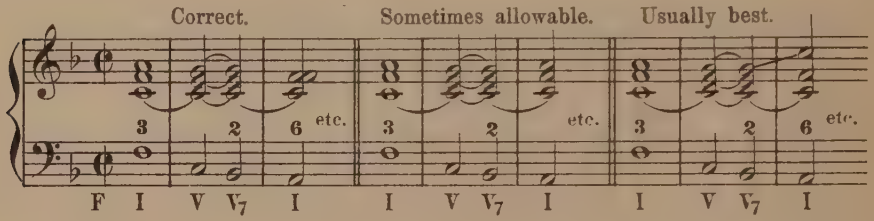
$\frac{6}{4}_{3}$ or $\frac{4}{3}$ denotes a chord of the 7th with its 5th in the bass.

$\frac{6}{4}_{2}$ or $\frac{4}{2}$ or 2 denotes a chord of the 7th with its 7th in the bass.

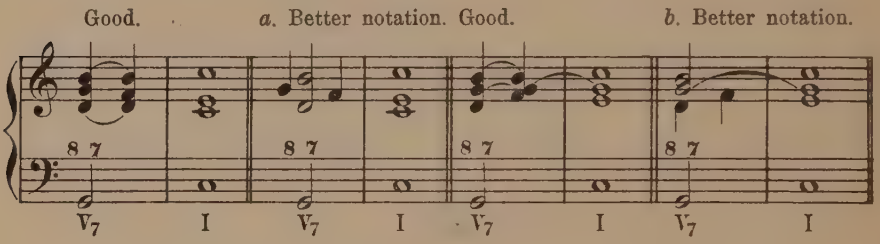
The same rules apply in resolving these chords, as when they appeared in the fundamental position, with the exception of the following

Rule. When the 5th of a 2, or $\frac{4}{2}$, chord is in the soprano, it often ascends a fourth in resolving, as shown in the third example, below.

Note. No part of an inverted chord of the 7th should be doubled, or omitted.

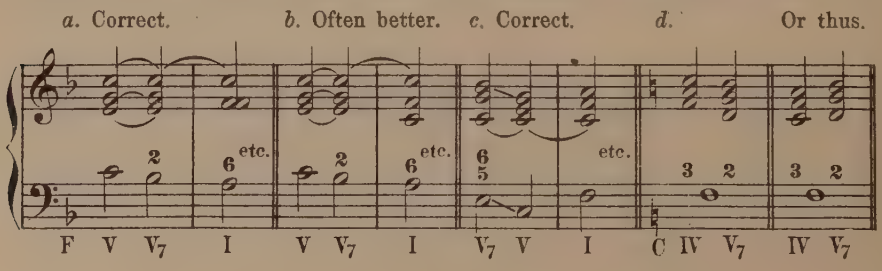


8 7 denotes a *triad* followed by a chord of the 7th, which may be employed in either of the following ways.

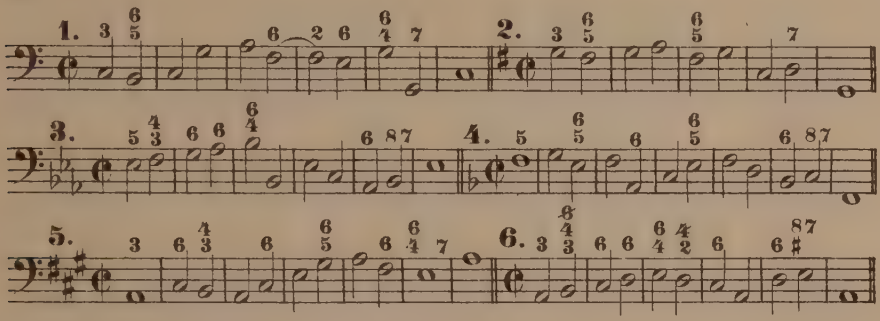


The student should use sometimes the form at *a*, sometimes that at *b*.

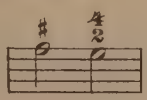
It sometimes happens that it is desired to bring the harmony gradually lower. This may often be done in a manner similar to that at *b*, below. Also at *c* appears a case where both the 7th and its resolution coming on the accented part of the bar, *a triad on the same root* may properly intervene in such a way as to make a perfect 5th follow an imperfect. At *d* is shown the effect of 3 and 2 over the same note, a triad followed by the third inversion of a chord of the 7th.



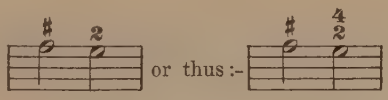
In the frequent use of abbreviated figuring, one should not forget the full. In harmonizing the following, care must be exercised that the rhythmic value of notes be correct, where two or more numerals occur consecutively over the same bass note.

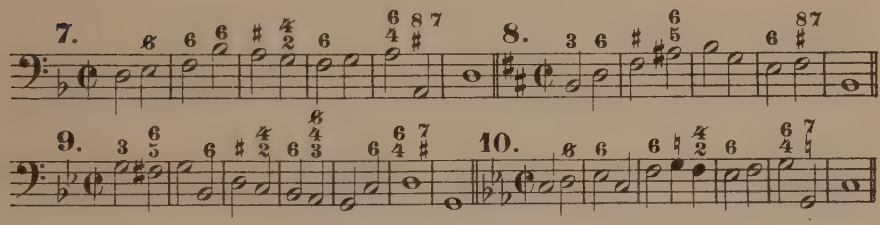


With figuring similar to the following,



the oblique line through the 4 merely continues the effect of the ♯ that precedes it: the 4 does not cause a double-sharp; and the effect would be quite the same, were the bass figured thus: —

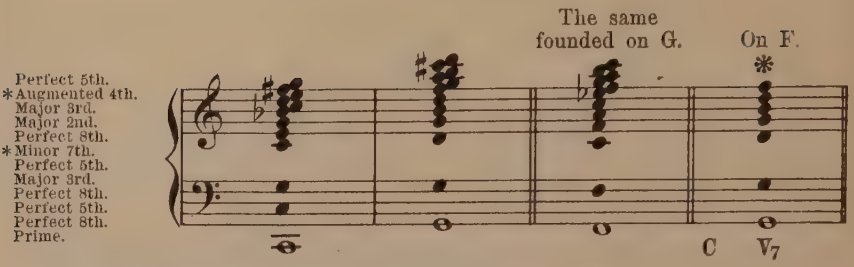




LESSON 11.

SECONDARY, OR COLLATERAL SEVENTHS.

In obedience to certain natural laws which cause many spontaneous subdivisions of a low rate of vibration (clearly explained in "Tyndall on Sound") when a tone is produced low in pitch but powerful in volume, it gives out certain overtones or harmonics, producing what is called *The Harmonic Chord of Nature.* The low note from which it springs is called its prime (root, ground-tone, fundamental, etc.) and the full Harmonic Chord presents the following intervals: —

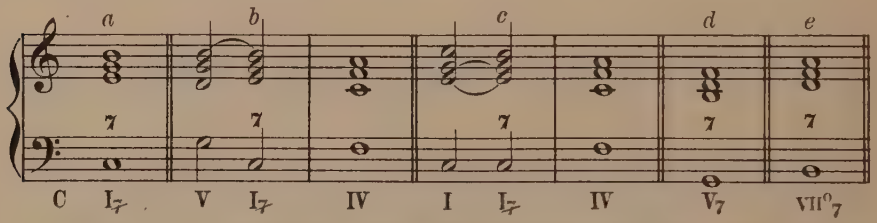


As the upper intervals are rarely audible, we may omit them to show, as at * that this chord contains the dominant seventh chord. It is doubtless owing to this that the latter sounds so pleasantly under all circumstances, if properly resolved. The chord of the seventh on the leading-tone, also, is contained in the Harmonic Chord of Nature. All other sevenths are called *secondary* or *collateral sevenths*. These, differing in various ways from the chords of the seventh found in the *Harmonic Chord*, cannot be used in the same way with them. We therefore adopt a

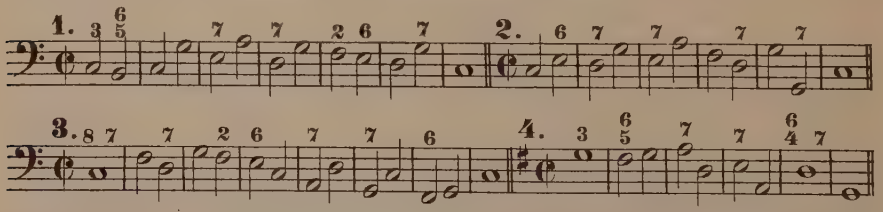
Rule for the Introduction of Secondary Sevenths.

No 7ths, except those founded on either the dominant or the leading-tone, can enter by a skip, either upward or downward: they must either be prepared or enter diatonically (that is, by degrees).

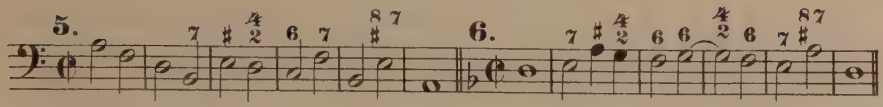
Note. A note is *prepared* when it has occured in *the same voice* in the previous chord.



At *a*, the 7th is intolerably harsh. At *b*, the same 7th having been prepared by appearing as the consonant 3rd of the preceding chord, is less unpleasantly dissonant, especially when followed by its resolution, as above. At *c*, the same 7th coming diatonically from above is only pleasant, succeeded as it here is, by its resolution. Compare *d* and *e* with the rule. While the basses of the following exercises naturally produce these proper results, the student should watch carefully the application of the rule, in order hereafter to introduce such chords in a musical way in exercises or compositions of his own.



* The minor 7th is a trifle higher and the augmented 4th a little lower than the harmonics actually thrown out by the prime; but our system of notation admits of nothing nearer than the intervals shown above.



CHORD OF THE SEVENTH ON THE LEADING-TONE.

This chord, though often following the resolution of other chords of the 7th, more frequently moves according to the following

Rules for the Leading-tone Seventh.

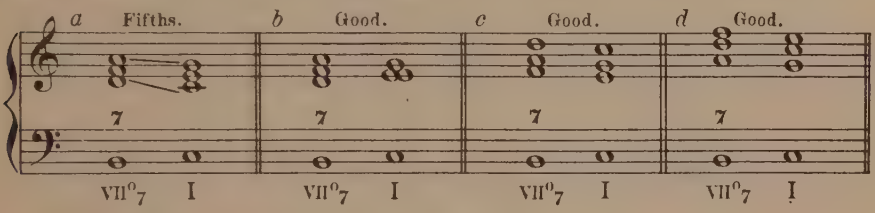
1. The root ascends one degree to the tonic.

2. If the 3rd is below the 7th, the 3rd ascends one degree; otherwise it usually descends one.

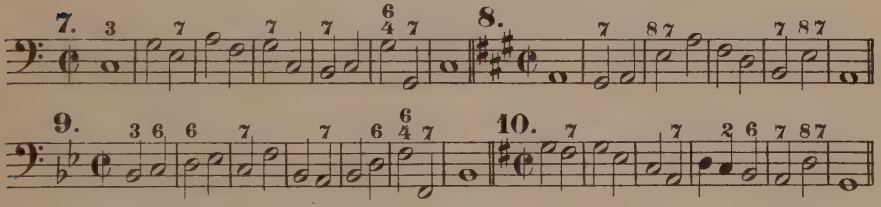
3. The 5th descends one degree.

4. The 7th descends one degree.

The second rule often doubles the 3rd of the resolution, but for reasons shown at *a* and *b*. The chord should be used with great care and not too commonly, especially in the positions given at *c* and *d*.



Observe that though this *triad* is diminished, the 7th is minor.



Note. The chord of the seventh founded on the tonic of the *minor* scale is not used, except with the notes of the descending *melodic* scale, or with modulation. See Lesson 21.

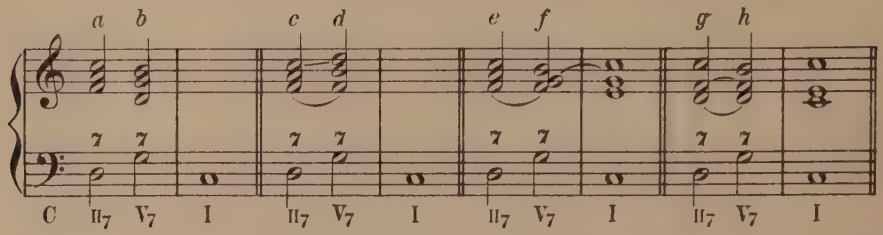
LESSON 12.

CONSECUTIVE CHORDS OF THE SEVENTH.

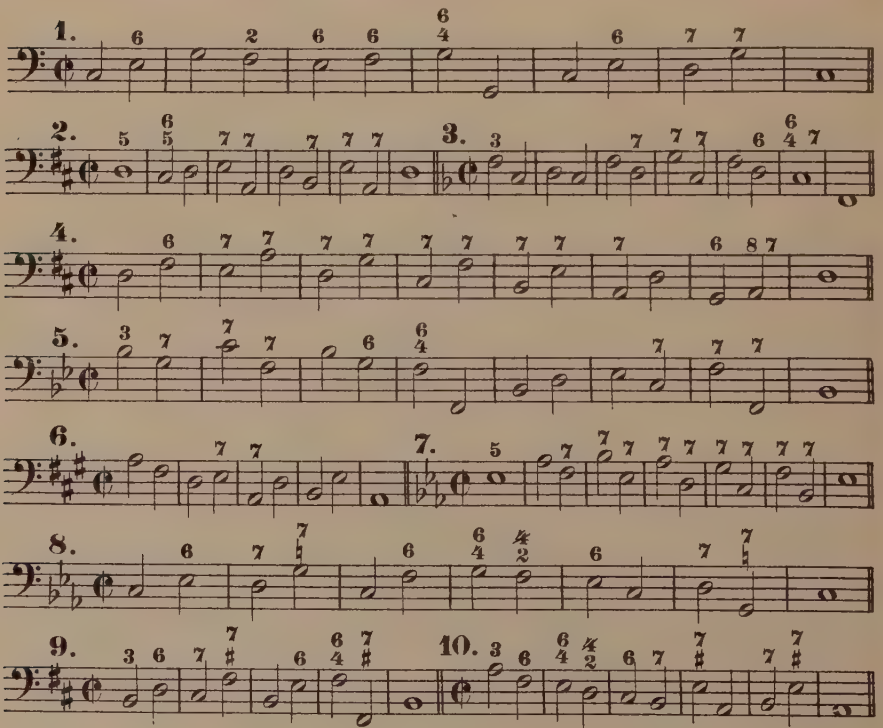
Heretofore the rules for the regular resolution of all the notes of the chords of the 7th have been sufficient. If now we write two or more consecutive chords of the 7th, *both chords having their roots in the bass,* we must omit the 5th in alternate chords. Whether it be omitted in the first of such chords and retained in the second, thus regularly alternating, or *vice versa,* depends often upon the chord immediately preceding, but is sometimes simply a matter of choice. To secure a strict and easy observance of the foregoing principle we adopt two

Rules for Consecutive Chords of the Seventh with their Roots in the Bass.

1. Write each 7th that the figured bass requires.

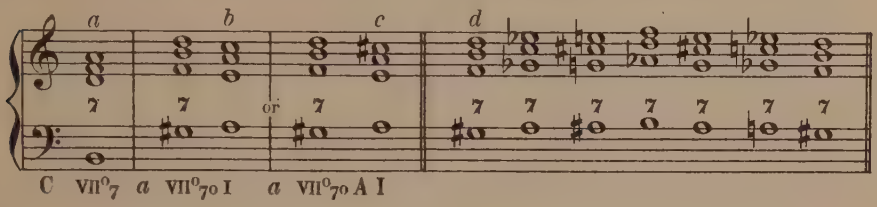
2. Resolve each 7th itself, whatever may be the progressions of the other intervals.

The regular resolution of the chord at *a* results in that at *b* — but the second chord does not contain the 7th required by the bass and violates Rule 1. Writing the full chord over each bass note at *c* and *d*, we fail to resolve the 7th in the chord at *c* and violate Rule 2. In the next bar we resolve the 7th in the chord at *e* and yet hold over its 3rd to become the required 7th at *f*, necessarily omitting the 5th in the second of the two chords. Or, writing the first chord without its 5th, as at *g*, we resolve its 7th and hold over its 3rd which becomes the 7th at *h*, which also has its own 5th. Another expression for the two rules given above is: —

In consecutive chords of the 7th with their Roots in the bass, the 5th is omitted in alternate chords.

The student should point out sequences wherever they occur.

LESSON 13.

CHORDS OF THE DIMINISHED SEVENTH.

A triad may be diminished and yet have a minor 7th, as at *a;* such must not be confounded with the diminished 7th chords. The *chord of the diminished 7th* is originally founded on the leading-tone of a minor key* and consists of the seventh, second, fourth and sixth degrees of the harmonic minor scale. Its most natural progression is to the tonic of the minor. In free composition this chord really requires neither preparation nor resolution; its resolution, when used, may be either minor or major, as at *b* and *c;* and consecutive chords of the *diminished* 7th may properly occur, in ascending or descending succession, as at *d*. As the name denotes, both the triad and its seventh are diminished.

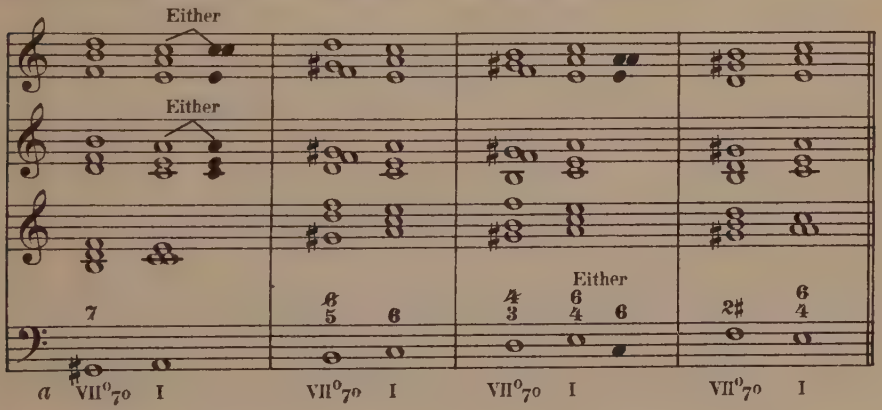


For its first simple use we adopt the following

Rules for the Regular Resolution of the Chord of the Diminished Seventh.

1. Its root ascends one degree.
2. When its 3rd is *below* its 7th, the 3rd must *ascend* one degree; but when its 3rd is *above* its 7th, the 3rd more frequently *descends* one degree.
3. Its 5th usually descends one degree but sometimes ascends one.
4. The 7th always descends one degree.

The following shows all the positions and inversions of the diminished 7th chord in the key of *a* minor, together with their resolutions.



The above form should now be written in every minor key, to seven sharps and seven flats, inclusive.

* When apparently in the major key, it is formed by chromatic changes explained in Lesson 18; and, *strictly* speaking, is transiently in a minor key.

☞ When one speaks of the diminished 7th chord *on* any letter, *on* D, for example, D would be the root of that chord and its regular resolution, according to the progressions shown above, would be to the triad of *e♭* minor. But of a diminished 7th chord *in d* (that is, in the key of *d* minor) the root would be C♯, the leading-tone in that key, and its regular progression would be to the triad of *d* minor. Special attention is called to this phraseology, that much needless confusion so often met with, may be avoided.

Transpose and harmonize the exercises of Lesson 7.

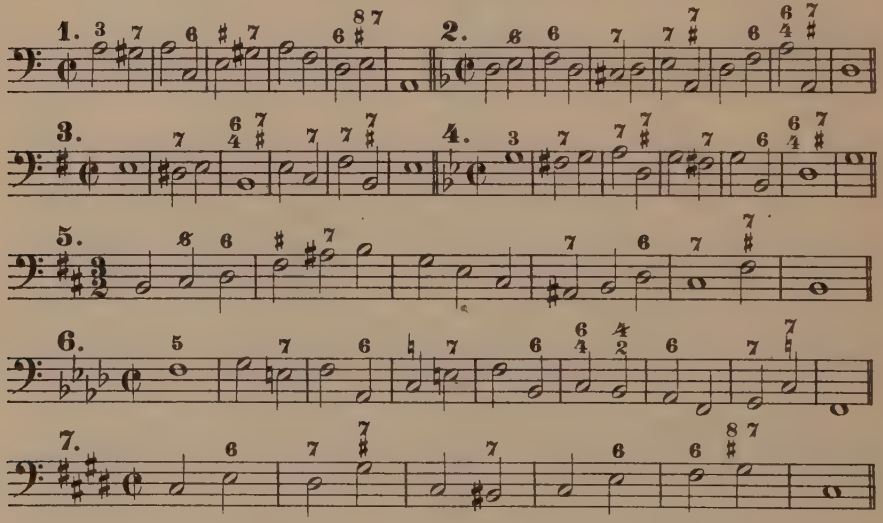
LESSON 14.

EXERCISES INTRODUCING CHORDS OF THE DIMINISHED SEVENTH.

Rules.

1. Parallel motion, even in four voices, to a chord of the *diminished* 7th, is correct, but only when really necessary.

2. The root of this chord, being the leading-tone, must not be doubled.

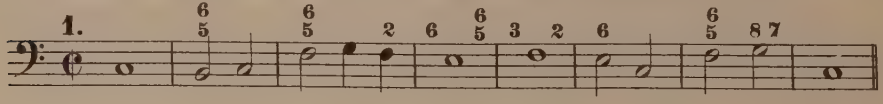


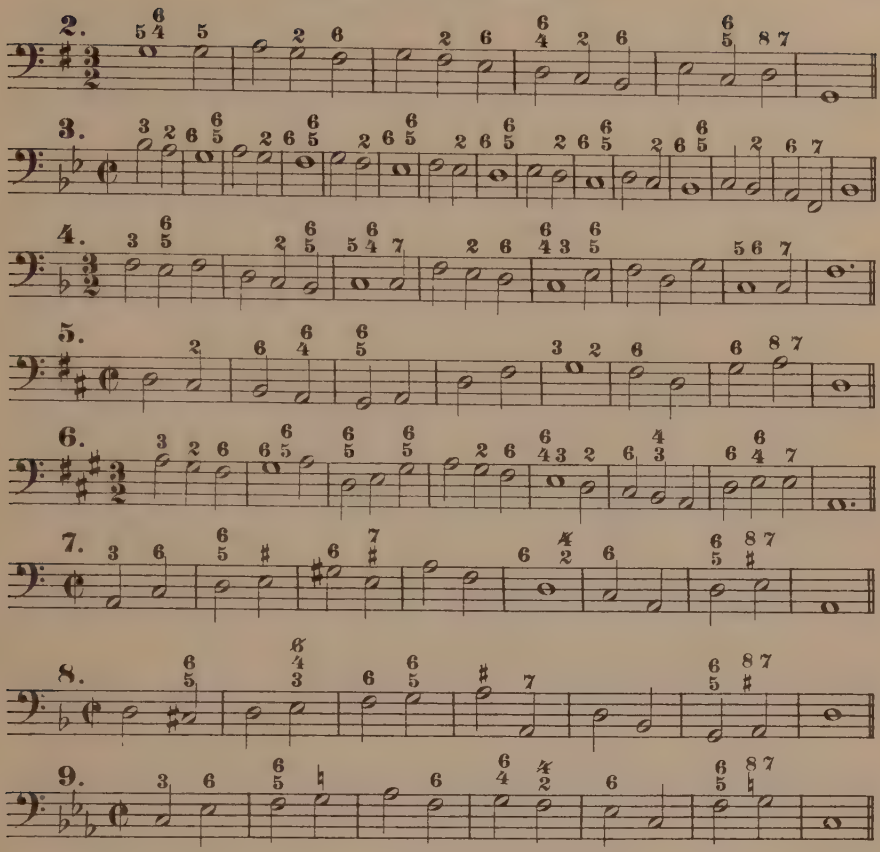
LESSON 15.

INVERSIONS OF SECONDARY SEVENTHS.

The student should be careful not to apply the rules of Lesson 12 to all consecutive 7ths, but only to such when *in the fundamental position.* Inverted 7th chords are not subject to these rules, but require the application of the rules given in former lessons.

When the same bass note is the root of one chord and the 7th of the next, it is usually best to lead the other voices *upward* to the second chord.





LESSON 16.

CADENCES.

A *cadence* is a more or less decided close of a harmonic progression. There are six kinds.

1. *The Perfect Authentic Cadence*, often called the *Full Cadence*, consists of the chord of the dominant, usually with its 7th, followed by the triad of the tonic of the same key, each chord having its root in the bass and with the soprano (or highest voice, whatever it may be) ending on the tonic. See *a*, below.

2. *The Imperfect Authentic Cadence* presents the same succession of harmonies as the Perfect Authentic, but with either chord inverted, or with the soprano not ending on the tonic. See *b*.

3. *The Perfect Plagal Cadence* consists of the triad of the subdominant followed by that of the tonic, both being in the fundamental position and with the soprano ending on the tonic. See *c*.

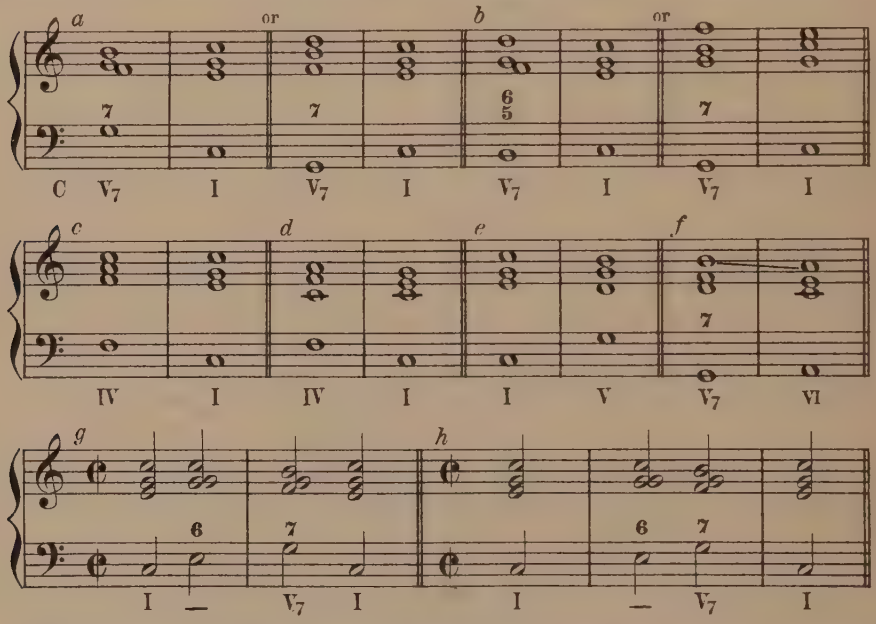
4. *The Imperfect Plagal Cadence* presents the same progressions of harmonies as the Perfect Plagal, but with either chord inverted, or with the soprano not ending on the tonic. See *d*.

5. *The Half Cadence* consists of any chord followed by the triad of the dominant. See *e*.

6. *The Deceptive Cadence,* sometimes called *Interrupted* or *False,* consists of the chord of the dominant, generally with its 7th, followed by any chord except that of the tonic. See *f*.

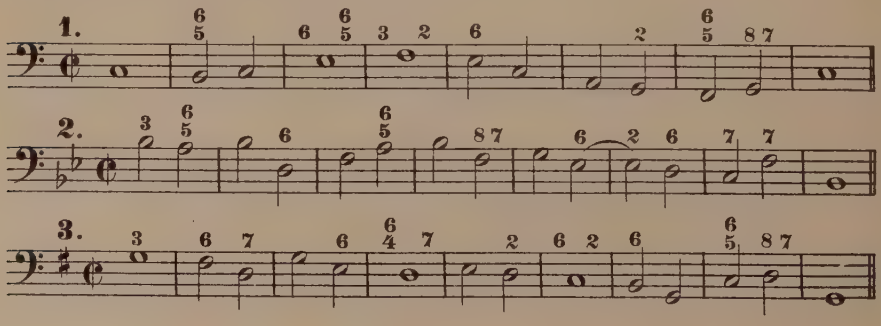
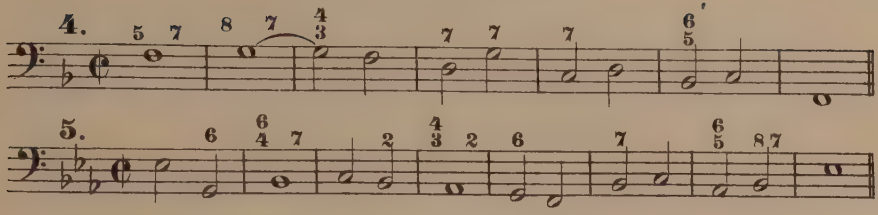
Note. Irregular progressions are found also on any degree of the scale.

None of these progressions form true cadences except when coming at the end of a phrase, and usually with the last chord on the accented part of the bar. The form at *g* should be regarded only as an unnaturally accented cadence; while that at *h* is more satisfactory when forming the close of an entire phrase.



The student should play each of these forms, except that at *g,* in each major and minor key.

When the form of the deceptive cadence occurs in the midst of a phrase, it is called a *deceptive progression.*

Rule. In the deceptive cadence and deceptive progression, the 3rd often descends one degree, as shown above, at *f*.



Transpose and harmonize Lesson 9.

LESSON 17.

IRREGULAR TREATMENT OF THE SEVENTH.

Although the downward progression of the 7th thus far invariably followed, is based upon natural harmonic law, many exceptions to this occur. Other chords may intervene between the 7th and its resolution as at 1, below, or prevent the latter altogether, as at 2. The voice singing the 7th sometimes interchanges intervals with some other voice, as at 3. It likewise happens that the bass occasionally descends to a lower octave of the resolution when the 7th has been in some upper voice, as at 4. Moreover, certain melodic movements of any two voices (frequently the bass and one other) as at 5 *j*, render the *upward* progression of the 7th most natural to both voice and ear, as at *k*. Again, changes of key often lead the 7th upward, as at 6. To provide for such exceptional cases we adopt the following

Rules for the Irregular Progression of the Seventh.

1. The resolution is *delayed* if one or two chords intervene between the 7th and its resolution.

2. The resolution *need not occur* if a sufficient number of chords follow the 7th to destroy its effect and the consequent necessity for its resolution.

3. The 7th may *progress freely downward* to a different interval of the same chord when some other voice takes the 7th.

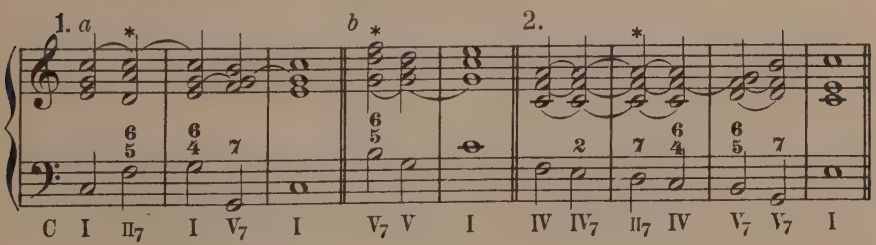
4. The 7th must *ascend* when another voice *descends* to its resolution, or to some octave of its resolution.

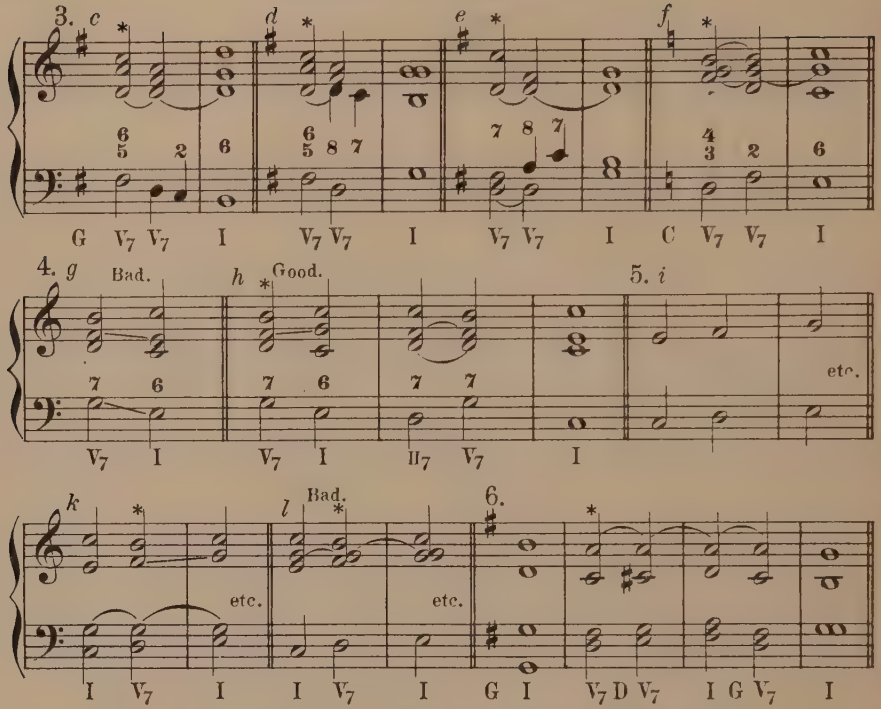
5. The 7th may sometimes *ascend* when its root is tied over to the next chord, provided the root and its 7th are separated at least a 7th.

6. The 7th must *ascend* when certain indicated changes of key are most easily produced in this way.

Illustrations

The chords marked * exemplify the rules.





At 4 *g* the bass descending with the 7th, forms hidden 8ths which are so noticeable as to be nearly as bad as consecutive 8ths. This causes an additional and very important

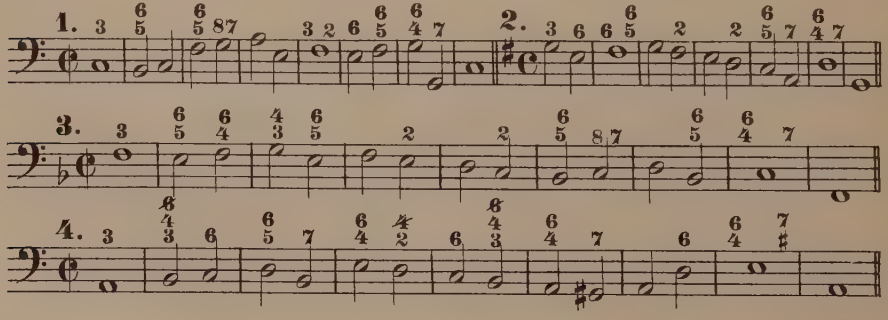
Rule against Hidden Octaves.

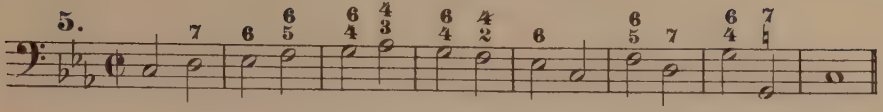
Hidden 8ths in which either voice passes over the 7th of a chord (this forming the hidden 8th) are to be avoided as never good.

Rule 4 above, provides against such progressions; but unless there be a *necessity* for any of the above exceptions, chords of the 7th must be regularly resolved. The Arabic numerals being arbitrary, the student must observe the following

General Rule.

Write the chords which are required by the figured bass, even though this should violate previous rules, taking care to connect the chords as smoothly as possible.



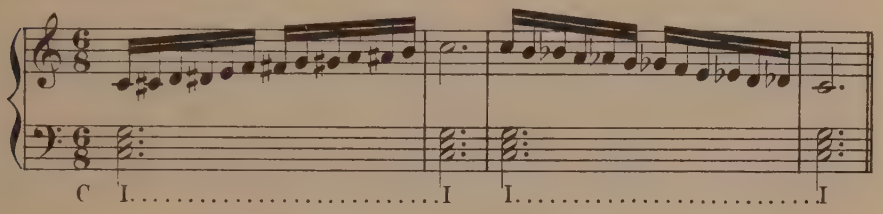


Frequent transpositions of former exercises into other keys should be made, both by writing and by playing.

LESSON 18.

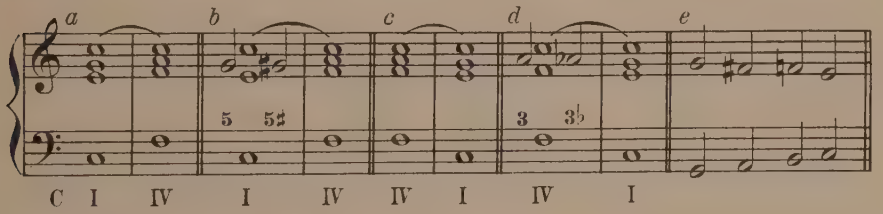
CHROMATIC CHANGES OF SINGLE NOTES.

Although the key of C major contains no sharps or flats, it is obvious that one may properly perform an ascending or descending chromatic scale of moderate rapidity while sustaining the triad of C, without changing the key or introducing contradictory effects, as here shown: —



In the same way, any part of these changes may occur with results similar in general effect. Such changes can come in any voice.

Rule. Any note may be chromatically changed without changing the key, provided such a change be rather melodic than harmonic, affecting more particularly the single voice in which it occurs.

In the following example, the movement of the alto at *a* is slightly changed at *b*, from one whole step to two half steps; but one cannot imagine this a modulation to *a* minor, although G♯ is the distinguishing characteristic of the latter key. This G♯ is plainly rather melodic than harmonic. Likewise the whole step of the alto at *c* becomes two half steps at *d*. Each of these chromatic changes is introduced merely to soften the progression of the single voice in which it stands and is not of importance sufficient to entitle it to *harmonic* consideration.

These examples suggest a

General Rule for Chromatic Changes.

A note chromatically raised, if preceded by one of *lower* pitch, most naturally *ascends* to the next degree: while a note chromatically lowered, if preceded by one of *higher* pitch, most naturally *descends* to the next degree.

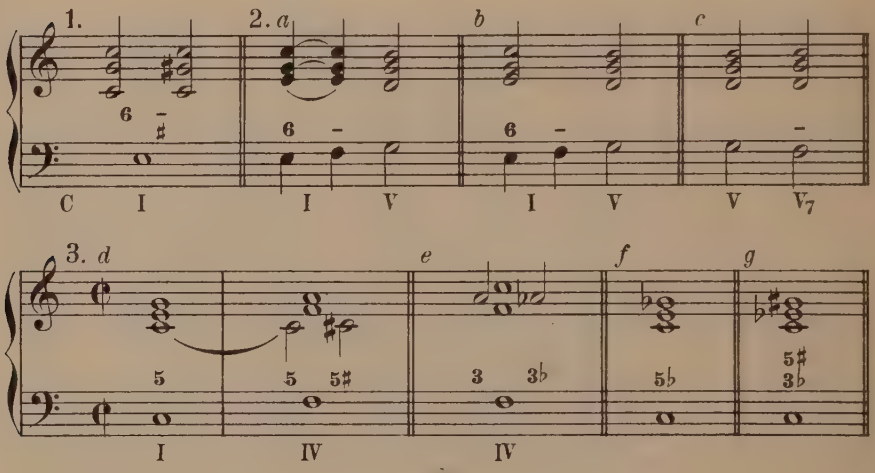
Cases like that at *e* above, do not present the conditions necessary to the application of this principle.

The student should remember that the numerals *in the midst* of an exercise never denote the position of the chord.

Rules.

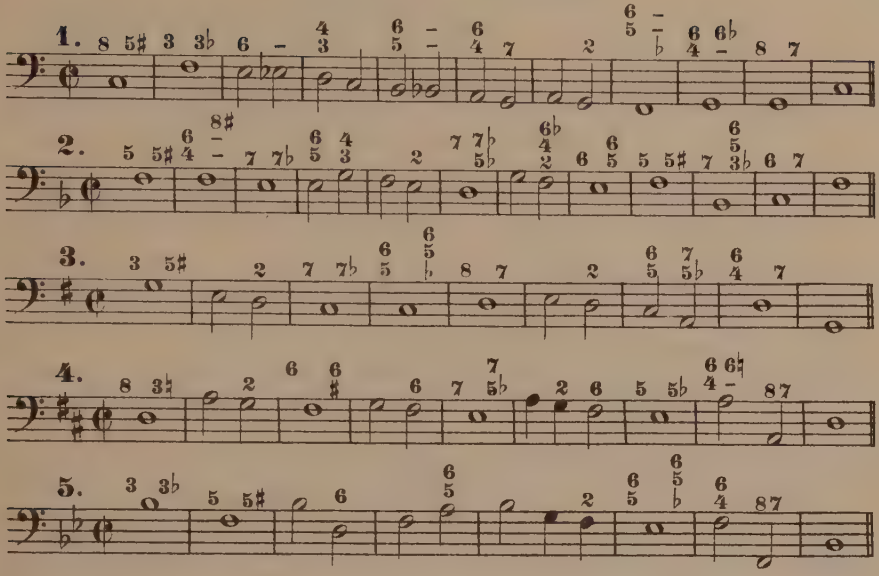
1. A dash *by the side* of any numeral continues the note or notes produced by that numeral.*

2. A dash standing *alone* over a bass note continues the next previous chord in the upper three voices, whether the bass belongs to it or not.

3. In the midst of an exercise, 5 5♯ denotes that the 5th is first natural and then sharped; and 3 3♭ produces a natural 3rd followed by a flat 3rd.

At 1, the 6 produces the triad of C and the dash repeats it; while the sharp with no numeral *by its side* raises the 3rd (G) above the bass note. The notation at *a* is improved at *b*. The F in the bass does not produce a new chord, but here appears as a *passing-note*. See Lesson 42. The chromatic changes above, being merely melodic and of no *harmonic* value, do not affect the use of the usual Roman numerals, which are the names of *chords*. Chords such as those at *f* and *g* are often found; but resulting as they do from *melodic* changes, they produce neither changes of key nor a really new chord. When the chord of the 7th on the leading-tone in a major key is followed by the same chord with its 7th diminished, this may be regarded as only a melodic (or chromatic) change, and not as a modulation. An example of this occurs in the third measure of the second exercise.

The first two bars of exercise 5, below, illustrate the *General Rule for Chromatic Changes*, given above.

* Many cases arise where a dash so placed *does not continue the numeral itself.*



LESSON 19.

ITALIAN, FRENCH, GERMAN AND NEAPOLITAN SIXTHS.

Among the many chord formations arising from irregular chromatic changes, some, like the preceding, have too little harmonic significance to entitle them to separate consideration; but there are four chords which, from their great harmonic strength and from their leading so strongly in certain directions, have acquired a place among independent chords — or, as chords having in themselves characteristics distinguishing them from all others. Their definition and stricter treatment now follow.

1. *The Augmented Sixth* chord, called, from the place of its supposed origin, the *Italian Sixth*, is the first inversion of a triad founded upon the fourth degree of a minor key (sometimes reckoned as on the second degree of the major) with its root chromatically raised. In four voiced harmony this chord must double its 5th; and one, or both of these 5ths must be below the root. If both 5ths be above the root, consecutive 5ths result in its next progression.

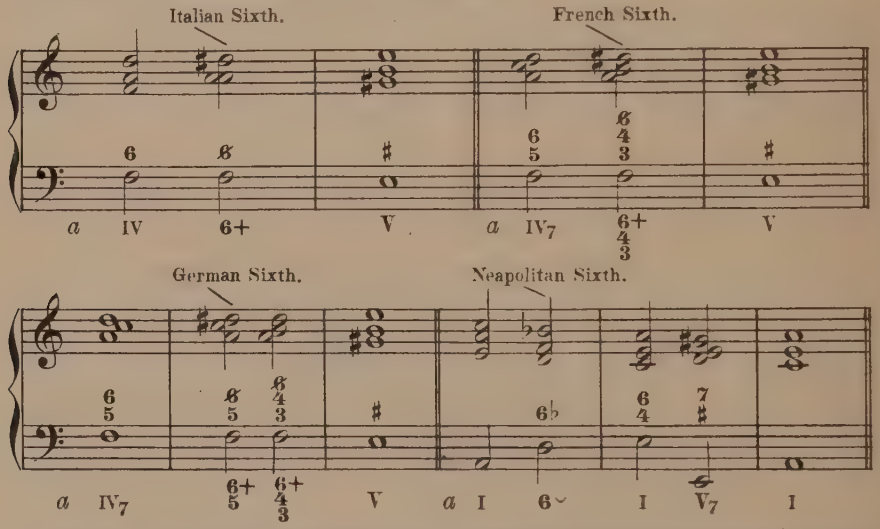
2. *The Augmented Six-Four-Three* chord, called the *French Sixth*, in the second inversion of a chord of the seventh founded on the second degree of the minor key, with its 3rd chromatically raised.

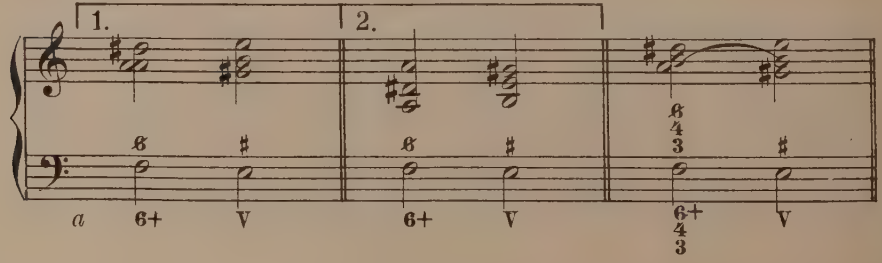
3. *The Augmented Six-Five* chord, called the *German Sixth*, is the first inversion of a chord of the seventh founded on the fourth degree of the minor key, with its root chromatically raised.

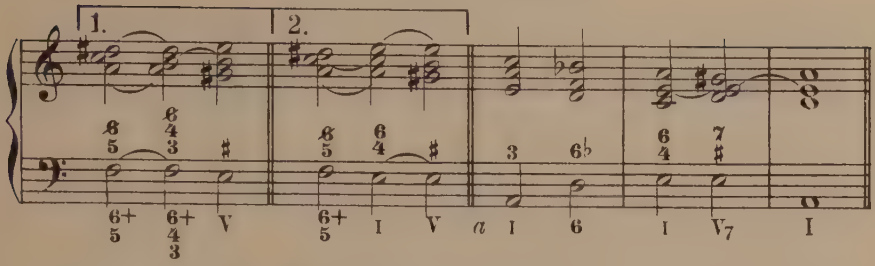
4. *The Flat Sixth*, called the *Neapolitan Sixth* is the first inversion of a triad founded on the second degree of the minor key, with its root chromatically lowered.

Of these four chords, the first three naturally progress to the dominant (of a minor key), the last being followed by the second inversion of the tonic of a minor key. The effect of each of these chords is most striking when the note

chromatically changed comes in the highest voice, though it often occurs in some other. The augmented six-five chord (German 6th) requires special care. Taken alone, it presents the same audible effect as that of the dominant 7th, for which it can never be properly substituted; but in its proper connection, neither chord can possibly be mistaken for the other. As the immediate progression of the augmented six-five chord to the dominant triad would produce 5ths, some other chord must intervene, as shown below — either way being wholly faultless. In each case where the three augmented 6th chords appear *in their original form* (see definitions 1, 2, 3, above) the 6th above the bass note is augmented, according to the first lesson on intervals.

In writing the names of these chords beneath the bass notes, instead of using the Roman numerals, the augmented sixth (Italian sixth) may be designated by either 6^{+} or It. 6; the augmented six-four-three (French sixth) by either $\frac{6+}{4\ 3}$ or Fr. 6; the augmented six-five (German sixth) by either $\frac{6+}{5}$ or Ger. 6; and the flat sixth (Neapolitan sixth) by either $6^{\smile}$ or N. 6.

The freer treatment of these chords is intentionally left for more advanced study. The special difficulty to be encountered here is not in the proper writing of the chords, wherever they may occur in the exercises, but in recognizing and naming them. To render them more familiar, therefore, the student should transpose the following forms into every minor key, fifteen in all. While other positions and inversions even, of these chords will be found hereafter, it will be best to use, *in this lesson*, only those here given, both forms being written where two appear. Observe that the 3rd is doubled in the $6^{\smile}$ chord.





Transpose some previous lesson as a review.

LESSON 20.

PRACTICAL USE OF THE AUGMENTED SIXTH, AUGMENTED SIX-FOUR-THREE, AUGMENTED SIX-FIVE AND FLAT SIXTH CHORDS.

In the following exercises, the $\frac{6}{5}+$ and $\frac{6}{4}{}^{+}_{3}$ chords may have the chromatically changed note in any voice that permits good chord-connection. Occasionally these chords are written with their roots in the bass, though still retaining their original names, as remarked in Lesson 36.

Should the student be in doubt how to name certain chords that now follow, let them be written separately *with their roots in the bass,* and then compared with the following table.

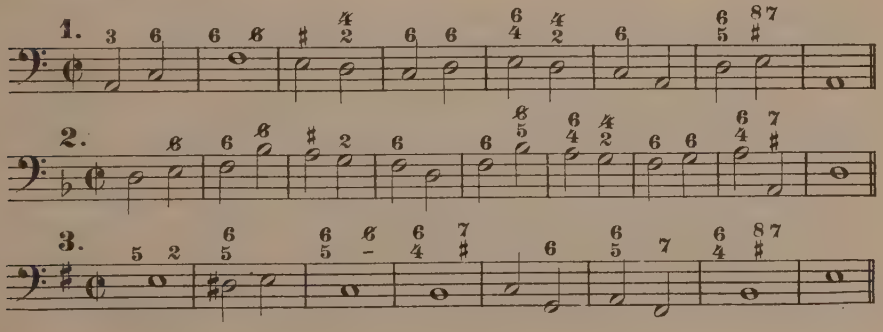
WITH ROOT IN THE BASS.

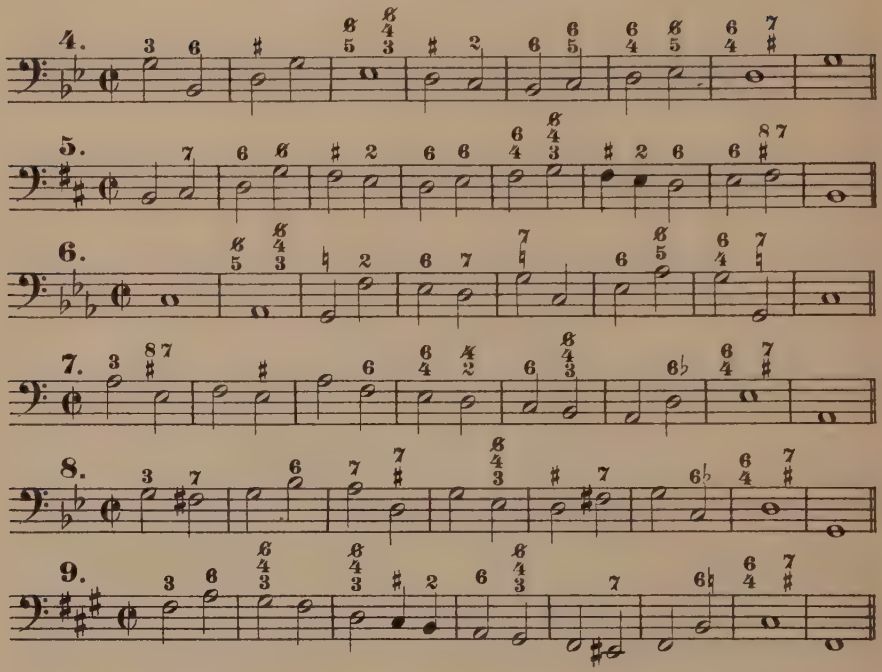
The VII° chord has a *minor* 3rd and an imperfect 5th.
The 6+ chord has a *diminished* 3rd and an imperfect 5th.

The VII°7 chord has a *minor* 3rd, an imperfect 5th and a diminished 7th.
The $\frac{6}{5}+$ chord has a *diminished* 3rd, an imperfect 5th and a diminished 7th.

The V_7 chord has a major 3rd, a *perfect* 5th and a minor 7th.
The $\frac{6}{4}{}^{+}_{3}$ chord has a major 3rd, an *imperfect* 5th and a minor 7th.

When in a Sixth, Six-Five, or Six-Four-Three chord the only note chromatically raised is the fourth degree of the minor key, the chord is either the Italian, German, or French Sixth; and when in a Sixth chord, the only note chromatically lowered is the second degree of the minor key, the chord is the Neapolitan Sixth.





Chords of the Ninth, Eleventh and Thirteenth.

While chords of the ninth, eleventh and thirteenth are met with, it is deemed best to treat of them, if at all, when the student is more advanced. The writings of the most eminent theorists of modern times tend to the conclusion that these are not chords complete in themselves but rather parts, or suspensions, of other chords. Such a view greatly simplifies their explanation and, what is of still greater importance, renders their correct employment almost certain, even at the hands of inexperienced writers.

LESSON 21.

MODULATION.

Several excellent writers speak of modulation as the progressions of harmony from each chord to the next, similar to any in the previous lessons. A more general, as well as a more accurate, use of this term suggests the following definition: —

Modulation is a change of key by means of connecting harmonies.

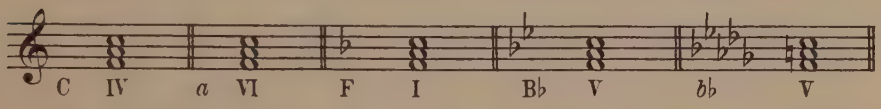
Therefore, abrupt changes of key having no connection whatever, should not, for the present at least, be considered modulations. Each key has its own distinguishing notes, beside many that are common to several other keys; and a modulation that does not eventually introduce the notes peculiar to the new key is weak and undecided. As already explained, keys are said to be *related* when they have many notes in common. From this it follows that the nearest related keys to C major are those of its dominant (G maj.), of its sub-dominant (F maj.), and of its relative minor (*a* min.). Next to these come the relative minors of its dominant and sub-dominant (*e* and *d* minor) and its own minor (*c* minor).

Each addition of sharps or flats places the new key still further from C. Modulations which lead constantly to nearly related keys, only, are necessarily more or less *gradual:* those which lead with but few chords to remote keys are somewhat *abrupt.* Modulations which merely pass through keys but do not remain in them are *transient:* those which firmly establish a new key are *decided* or *permanent.*

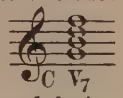
Note. Transient modulations are often called *partial;* and decided modulations, *entire.*

The surest way of rendering a modulation decided is by means of a perfect authentic cadence in the new key. A triad in the fundamental position rarely determines the key, its signature and other surroundings being necessary to this.

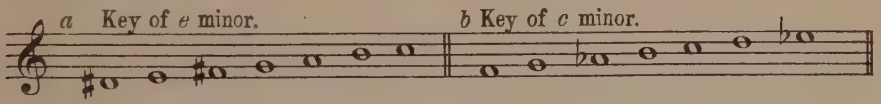
In the following illustration, the triad of F major can appear in either of five keys, each of these being recognized only by its own signature.



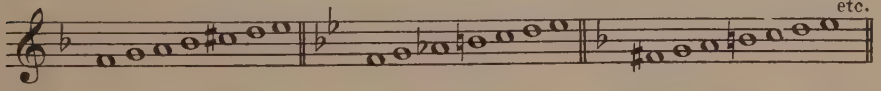
But the chord of the *dominant 7th* cannot properly be regarded as in either of several keys: it is in but one (either major or minor). This 7th chord cannot be in any key with sharps, as its F is natural; nor in any key in which the B is not natural. It must therefore be in either C major or *c* minor. From this, its great use in rendering a modulation decided is plainly evident.



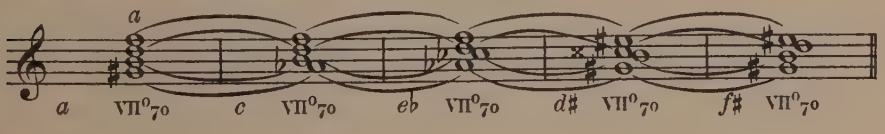
When chromatic changes occur, introducing in a *purely harmonic* sense the distinguishing characteristics of any new key, a modulation to that key is produced. Care must be exercised that merely melodic changes similar to those in Lesson 18, be not confounded with modulation. Just here the student is reminded that he should be familiar not only with the correct number of sharps or flats in any key, but also with the particular notes thus affected. A key with two sharps is not invariably D major, as shown at *a;* nor is one with two flats always B♭ major — see *b.*

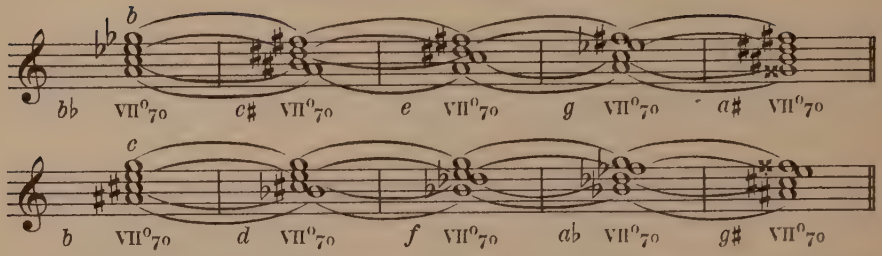


The instructor should write numerous examples similar in principle to these and the following, the pupils naming the keys.



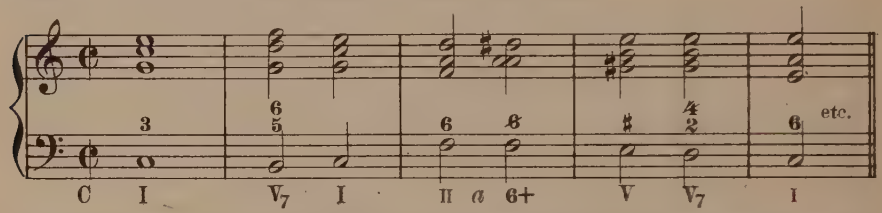
Attention is directed to the strong harmonic character of the *diminished 7th* and of the three kinds of augmented 6th chords, for purposes of modulation. The former may be used with enharmonic changes to produce somewhat gradual modulations to even remote keys, as here shown.





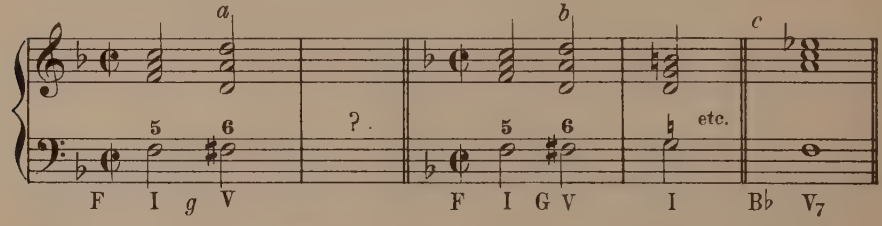
The three chords above marked *a, b* and *c,* contain together all the tones of the chromatic scale: the four chords following each of these three, present the same tones but with different notations. The *root* of each chord being found, the student will remember that this was stated to be the leading-tone of a minor key, showing the key itself to be a diatonic semitone above each root, as named below the chords.

When either of the augmented 6th chords is used to modulate from a major to a minor key, the change may properly be marked as below, although the modulation is not fully accomplished till one chord later.



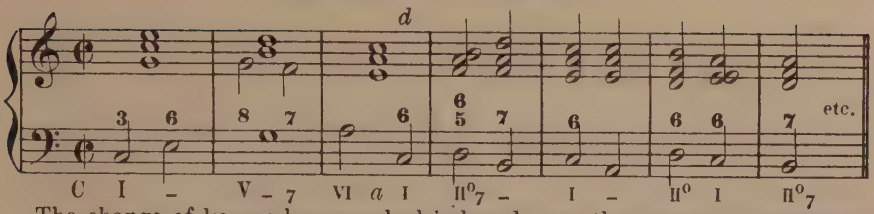
The recognition of a key often depends upon what we have every reason to expect *may* follow it, as at *a*, below. So, too, a glance at the chord next *after* another, often changes the key of the earlier chord, as at *b*.

Examples likewise occur in which the key of a single chord can be determined only by what it implies as to its unexpressed signature, as at *c,* where the chord must be in the key of B♭ (either major or minor) as each key having an E♭ has also a B♭ in its signature.



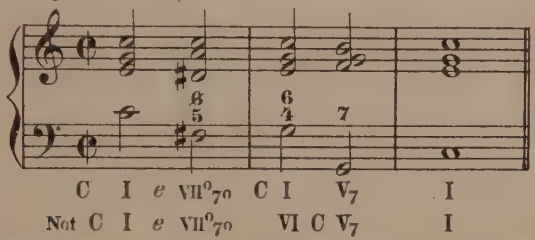
Beside chromatic changes, several chords in an otherwise unusual arrangement and with no chromatic changes often introduce a modulation. Of these the most prominent is the second inversion of *triads* (six-four chords) founded on any degree of the scale but the tonic or the sub-dominant. The force of these inversions is expressed in Rule 4 and its illustration, below.

Occasionally, an exercise beginning in a major key presents so many minor chords, or those most frequently used in minor keys, that though no change occurs similar to those already mentioned, one feels the key to have become unmistakably minor, as follows:



The change of key as here marked is based upon the common arrangement and use of certain chords, as suggested in Lesson 43.

The Roman numerals must be marked, reckoning from each new key wherever a modulation occurs, as in Illustration 2, below. Exceptions to this may occur *very near the close* of any exercise, where the original key reappears, whatever may have preceded it, thus: —



Although some of the following rules may appear unnecessary, experience abundantly proves the contrary: especially is this true of Rule 1, students showing a constant tendency to mark new *keys* where only new *chords* occur without modulations.

Rules for Modulation.

1. Harmonies must not be marked as modulations except where both the eye and the ear plainly recognize them as such. See also Rule 4.

2. The original signature must be regarded unless plainly *contradicted* by some chromatic sign, or changed by implication. (See previous illustration at *d;* also Rule 4.) Chromatic changes which might properly be *additions* to the original signature must be so reckoned.

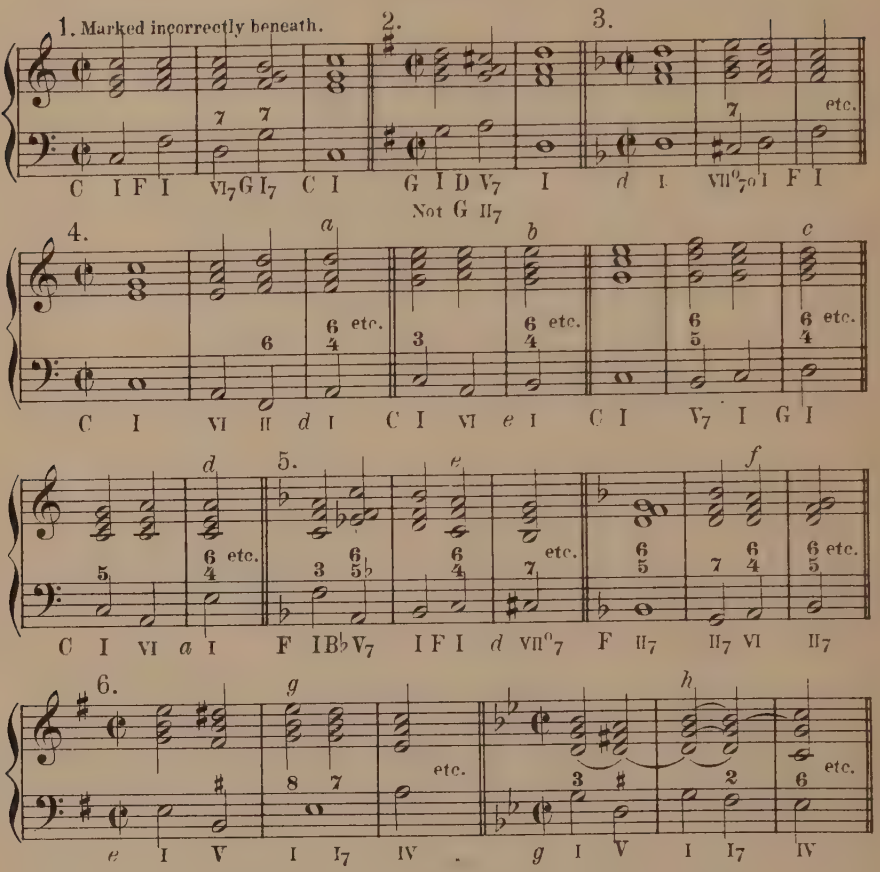
3. Wherever the key changes, the new key is generally to be recognized as that nearest related to the one just left, of which the harmony admits, except near the close, when the original key reasserts itself. Elsewhere the new key remains till plainly changed.

4. When any chord might seem to be the second inversion of a *triad* (six-four chord) founded upon either the second, third, fifth, or sixth degree of the scale,* especially when on the accented part of the bar *(thesis)* the root of that chord is usually to be regarded as the *tonic of a new key.* (The only accented six-four chords in common use are those with either the tonic or the sub-dominant as their root.)

5. When any one of the chords mentioned in Rule 4 stands on the unaccented part of the bar *(arsis),* if it be preceded by one key and followed by another, it usually becomes the tonic of a new key, as at *e;* but if preceded and followed by the same key, it does not itself produce a modulation, as shown at *f.*

6. When the tonic triad of the minor key is followed by the same chord with its *minor* 7th (one of the notes of the *descending melodic* minor scale) no new change of key occurs: the two chords may be named I I_7.

* The triad of the leading-tone is not used as a six-four chord, save as a *passing-chord.* See Lesson 42.

Illustrations.

At 1, every chord belongs unmistakably to the key of C major. At 2, the C♯ is to be added to the signature. At 3, the triad of F, though belonging sometimes to one key, sometimes to another (see first illustration in this lesson) must here be marked as the tonic of F major, that key being the nearest related to the one just left, *d* minor. At 4, the student should play each example with a slight accent on the first part of each bar; and if the ear be at all musically cultivated, it will seem almost necessary to terminate each example with a dominant 7th chord and triad of the tonic in the new keys last marked under *a, b, c* and *d*. At 5 *e*, the unaccented six-four chord stands between different keys, and therefore changes the key, itself; but at *f*, the key remains unchanged. At 6 *g*, the D♮ in soprano is a part of the descending melodic minor scale of *e*, and therefore does not change the key. Also at *h*, the F♮ in bass is a part of the descending melodic minor scale of *g*.

UNHARMONIC CROSS RELATION.

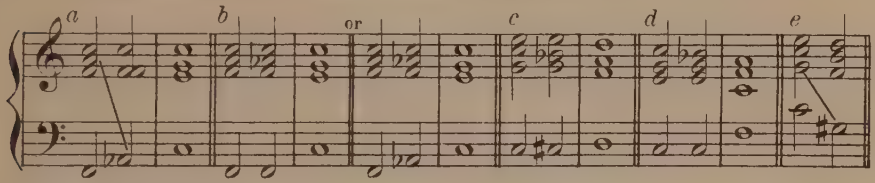
The principle involved in this term is that one voice or part must not unpleasantly contradict the *harmonic* import of some other voice, more especially

in connection with chromatic changes. There being some variance in the opinions of good writers on this subject and so many exceptions to any rule that might properly be given concerning it, only the most palpable violations of the principle above stated need engross the attention of the student at this point in his study. A clearer understanding of this fault and the best method of avoiding it may perhaps be secured by observing the following

Rule against Unharmonic Cross Relation.

When any note of one chord is chromatically changed in the next following chord, both of these notes must occur in *the same voice* except where the second chord *assists* in producing a modulation: otherwise the unharmonic cross relation ensues.

At *a* is the illustration of the unharmonic cross relation. At *b* this is avoided by following the rule. At *c* it is shown to be unnecessary for the chromatic change to occur in both voices that gave the natural note, provided the voice that gives the second give also the first. At *d* the B♭ not being preceded by a B♮ in any voice, the principle is not violated. At *e*, all the voices forming a part of the modulating chord, no *contradiction* of harmony is involved.



Previous examples show that a single chord is often sufficient to produce a transient modulation.

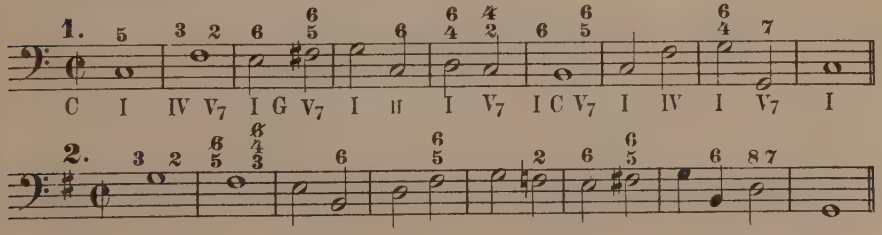
Further explanations adapted to the wants of each pupil will be indispensable in connection with the subjoined exercises.

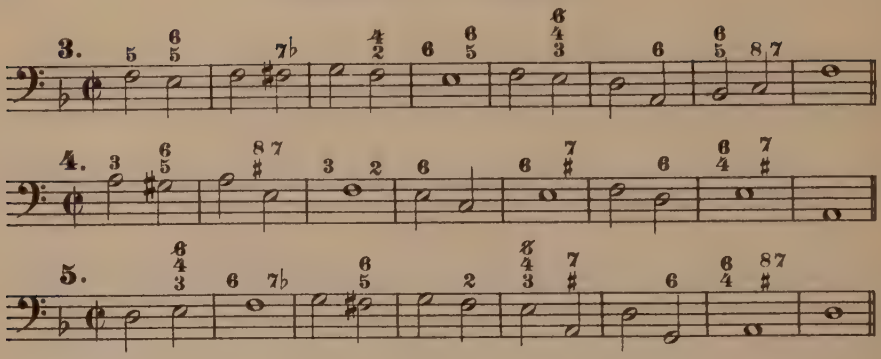
1. A root, diminished 3rd and imperfect 5th form the 6^{+} chord.
2. A root, minor 3rd, imperfect 5th and diminished 7th form the $\text{VII}^{\circ}{}_{7^{\circ}}$ chord.
3. A root, diminished 3rd, imperfect 5th and diminished 7th form the $\frac{6}{5}^{+}$ chord.
4. A root, major 3rd, perfect 5th and minor 7th form the V_7 chord.
5. A root, major 3rd, imperfect 5th and minor 7th form the $\frac{6}{4}{}^{+}_{3}$ chord.

☞ As additional names of keys must now be written beneath, requiring more space than heretofore, the student should write the chords well separated, and should remember to designate major keys by capitals, and minor keys by small letters (not small capitals). It may be easier to write the Roman numerals after writing the chords.

An illustration of Rule 6 occurs in the fifth exercise.

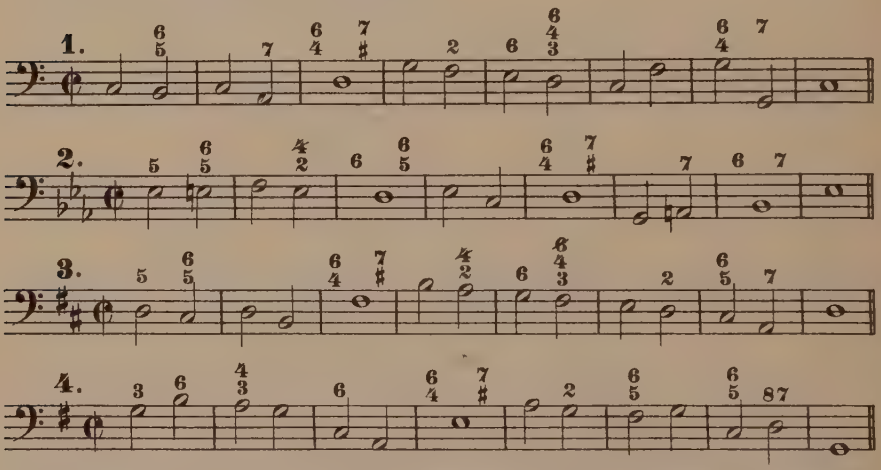
Modulations by means of chromatic changes.





LESSON 22.

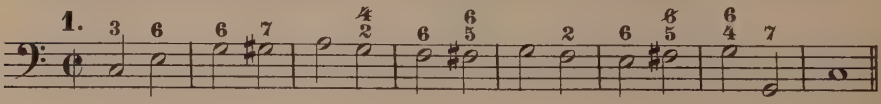
Introducing illustrations of Rule 4.

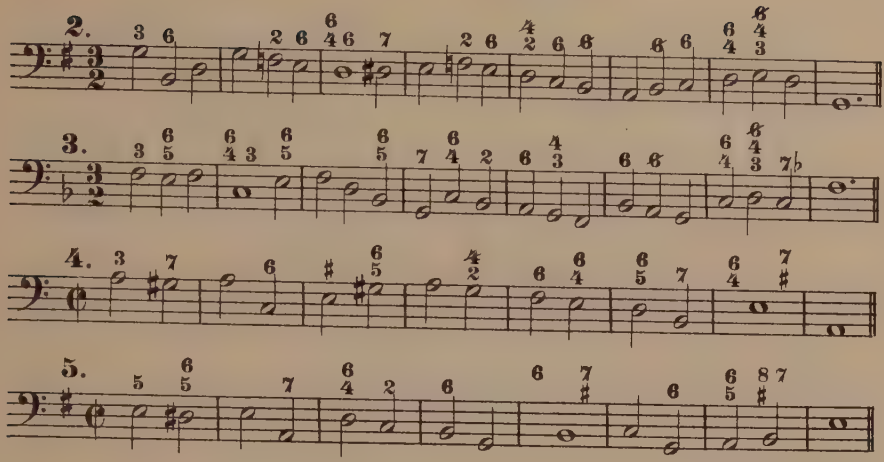


The student should add to this lesson any three exercises of Lesson 21, transposed into keys one degree higher or lower than first written, taking care to make such changes in chromatic signs as will be adapted to the keys newly selected.

LESSON 23.

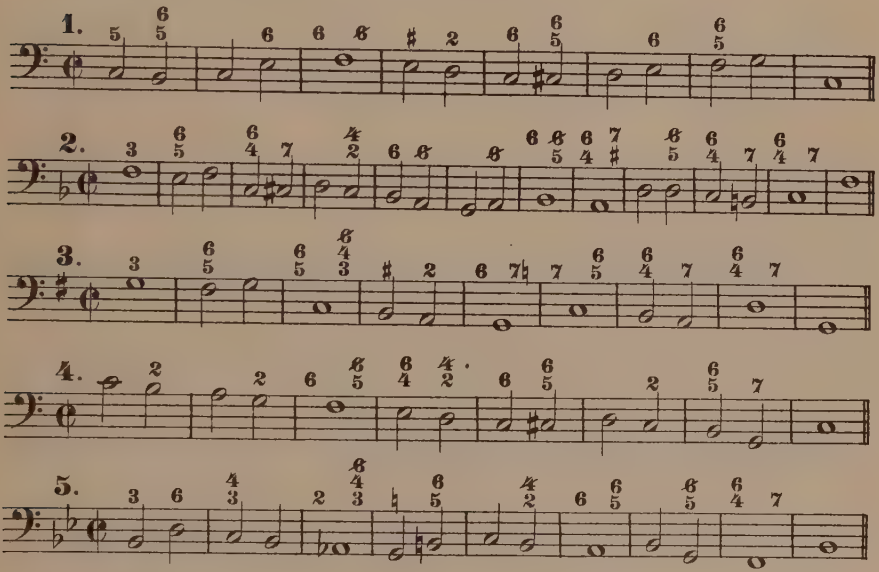
The first exercise contains a free treatment of the diminished 7th chord.





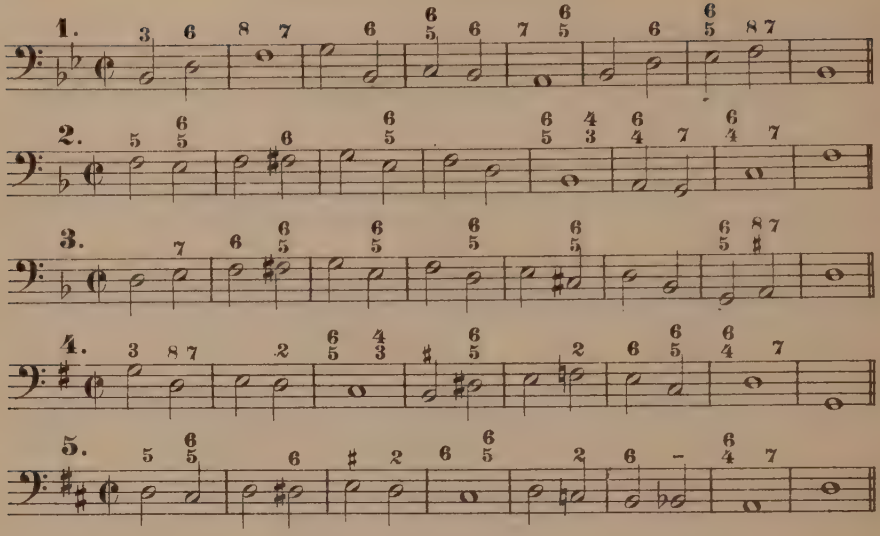
LESSON 24.

Modulations by means of Augmented Sixths.



LESSON 25.

Some of these modulations present no chromatic change. *Rule.* If any chord might seem to be either VII° (VII°$_7$) in a major key, or II° (II°$_7$) in a minor, if followed *at once* by the minor key, mark it as in the minor.



LESSON 26.

When two or more compositions are heard consecutively in different keys, a short interlude consisting of a modulation from the close of one to the beginning of the next, avoids abruptness and renders the whole more enjoyable to the auditor. Such transitions are most satisfactory when not shorter than a phrase (four bars). An entire phrase being more complete, and for this reason more easily remembered than fewer chords would be,* the following modulations will be given in that form. While countless other forms for each modulation could be shown, these that follow are perhaps quite as simple, as decided, and as easily remembered as any; but the student having first become perfectly familiar with these, should then invent other forms of his own, for each change of key. The form given should be written out in at least three other keys and afterward played on the pianoforte or organ, *without notes*, beginning each form in every key (major or minor, according to the original model). But in playing these modulations in various keys, *the student should not rely too much upon the feeling of the hands or fingers as they touch the keys*. This unintelligent way should not be allowed; but one should be able, at any point of the modulation, to name the key, the root of the chord, and the position or inversion of the latter. Anything short of this is a waste of time. It is evident therefore that it is of great importance to commit to memory the formulæ expressed by the letters and Roman numerals beneath the chords. Although the modulation below is given in several ways differing according to the position of the first chord, in order to meet every probable contingency in its practical appliction, it will be best for the student, in transposing into other keys, to use only one form — perhaps the first — until later. Many different positions are of course possible in all other forms hereafter given; but a careful study of the first and its relative changes should enable the student to write and play these, without each being here shown.

As a modulation to the dominant is among the most natural, it is given first. By "a modulation to the dominant" is meant a harmonic progression whereby

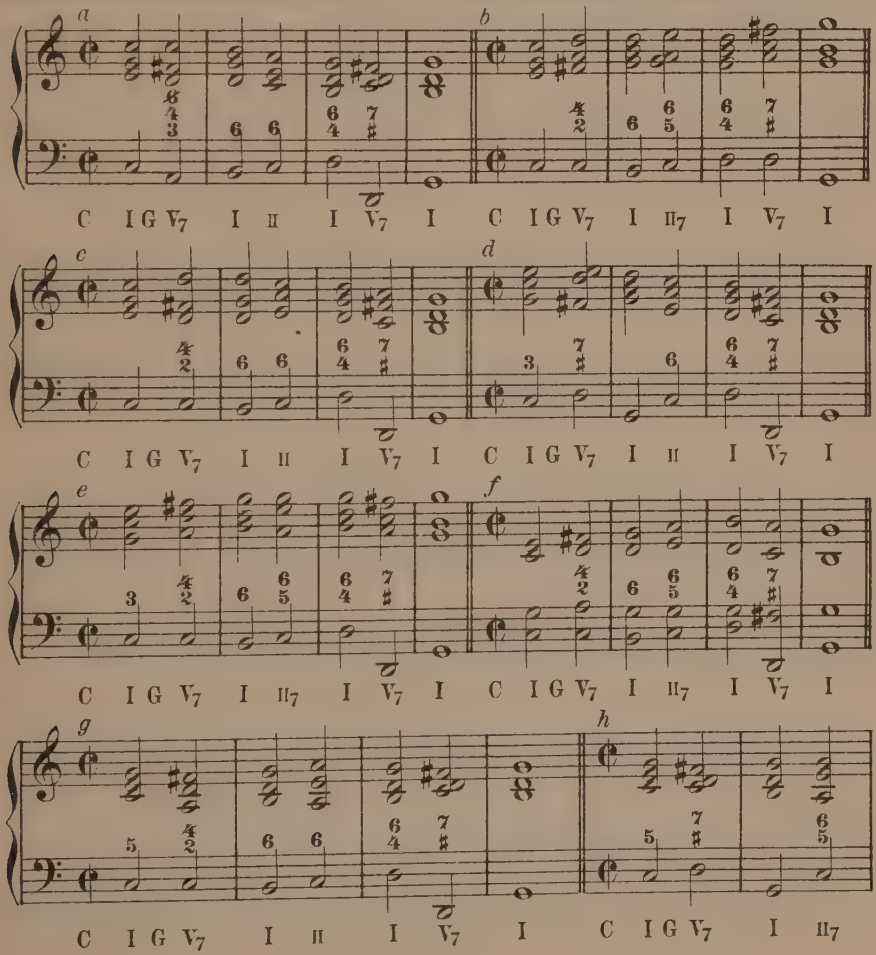
* This is constantly shown to be true in students' practice.

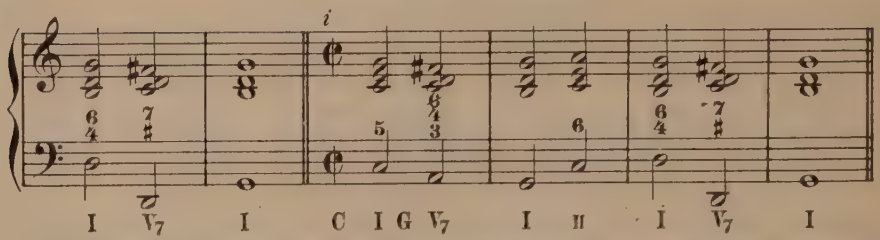
the dominant of the original key becomes the tonic of the new; the original tonic becoming the sub-dominant of the new, as: a modulation from C major to its dominant G, renders G the tonic of which C is the sub-dominant. A modulation to the dominant is otherwise expressed by calling it a modulation up a perfect fifth (or its audible equivalent, as from C♯ to A♭ instead of to G♯). All these, though written in four-part harmony, may be regarded as instrumental, being sometimes too free for easy vocal performance.

Each form is here closed with a perfect authentic cadence, that being the strongest. See Lessons 16 and 21.

In the following form for modulating up a perfect fifth, from one major key to another, the dashes occupy places to be afterward supplied with letters, according to the desired keys. The vertical lines represent the bars. Signs in parenthesis are sometimes used, sometimes not.

— I — V_7 | I $II_{(7)}$ | I V_7 | I

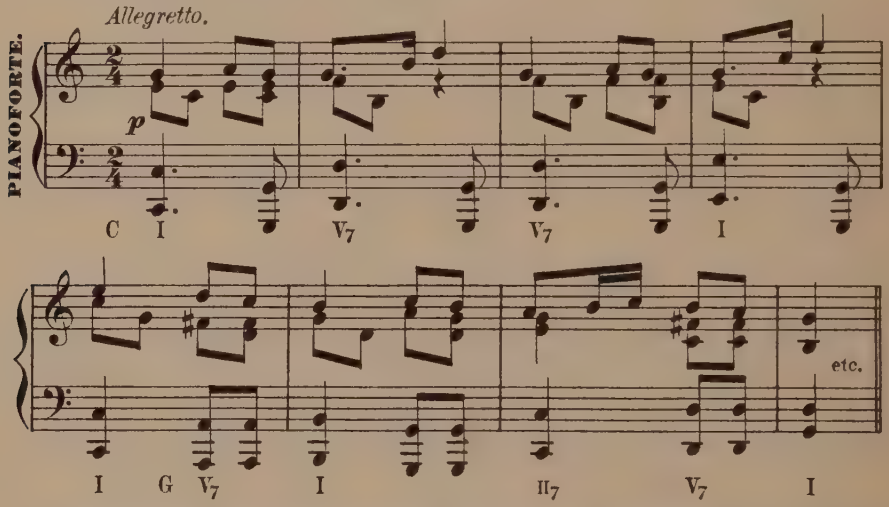
Writing now any letter in place of the first dash, the letter representing a perfect fifth above the first should stand in place of the second dash and the proper chords be written above them. A mental picture of this form will be of the greatest aid in transposing. The form at *a* will be perhaps the easiest to memorize.

a
C I G V7 I II I V7 I
b
C I G V7 I II7 I V7 I
c
C I G V7 I II I V7 I
d
C I G V7 I II I V7 I
e
C I G V7 I II7 I V7 I
f
C I G V7 I II7 I V7 I
g
C I G V7 I II I V7 I
h
C I G V7 I II7



Still further varieties even on this simple formula are easily made by combining a few bars of one with a few of another. The student should thoroughly *know* some one of these nine forms, before attempting to transpose; and then he may modulate successively through keys in the following order: —

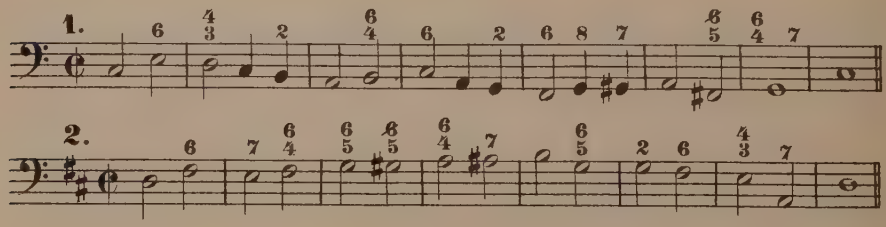
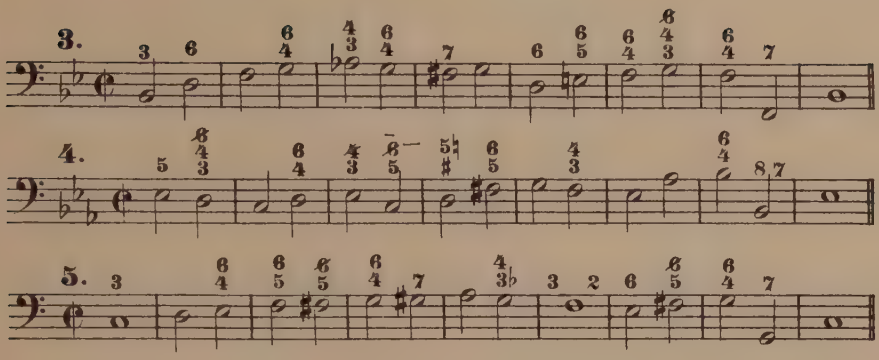
C, G, D, A, E, B, (or C♭) F♯ (or G♭), D♭ (or C♯), A♭, E♭, B♭, F, C.

The following example shows how the above form, somewhat elaborated, may be employed in a freer style of writing.



It should here be observed that in the midst of a composition the key may properly change without a modulation (according to the foregoing definition) when a passage terminates in one key and is immediately followed by one in another, as would be the case with a melody closing in a major key, succeeded at once, with no intervening chords, by one in the relative minor, etc., the change being recognized as taking place at the first chord of the latter passage.

Before writing the following exercises, the student should refer to Rule 5 in Lesson 21.



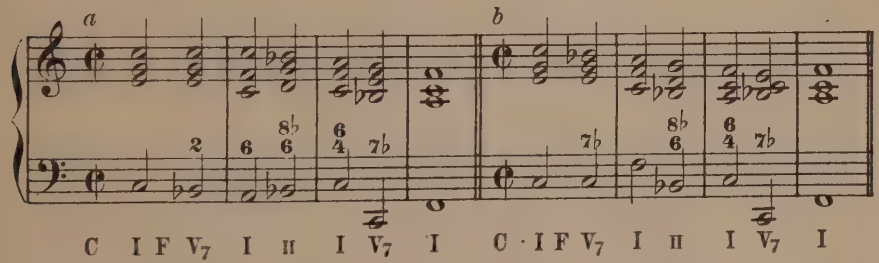
LESSON 27.

According to the principles explained in the previous lesson, the following will enable the student to modulate from any key to its sub-dominant — which can be used as a *return modulation* coupled with that already given; as, having modulated up a perfect fifth (or down a perfect fourth), a modulation up a perfect fourth (or down a perfect fifth) restores the original key. In transposing this form, the order of keys as given above should be reversed. Only the easiest forms are given. The letter occupying the place of the second dash should represent a perfect fourth above the first.

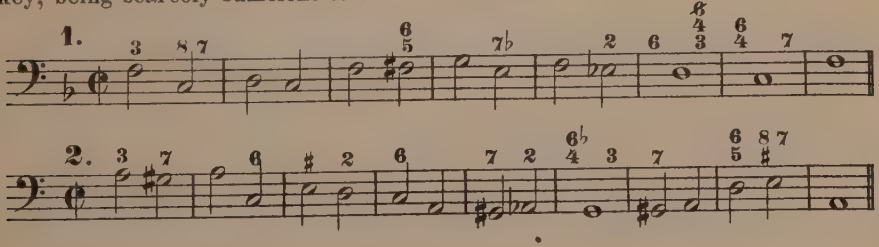
Formula for modulating up a perfect fourth from major to major.

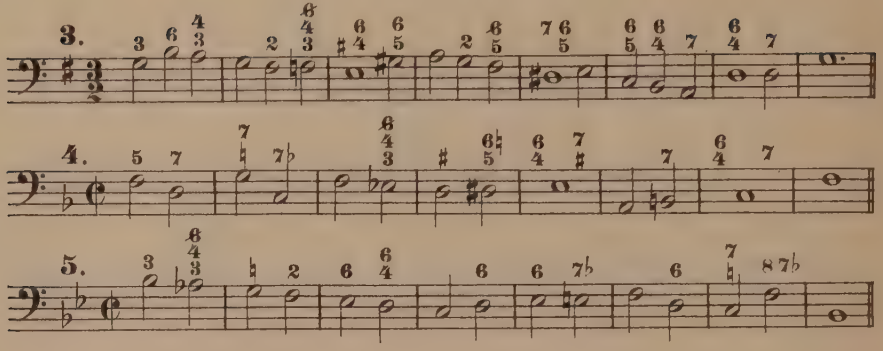
— I — V_7 | I $II_{(7)}$ | I V_7 | I

Application.



The 5th, 6th and 7th bars of No. 2 illustrate forms of modulation to be used only with extreme caution, the mere change of notation, though changing the key, being scarcely sufficient to avoid harshness.





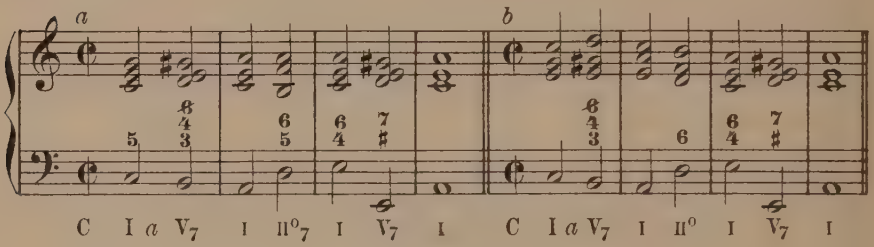
LESSON 28.

The student should play a modulation from every major key to its relative minor, using either of the following forms.

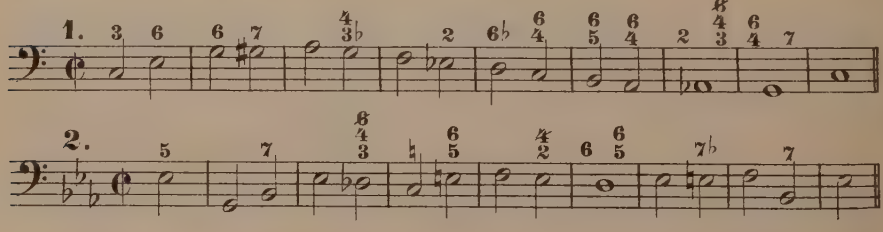
Formula for modulating from a major key to its relative minor:

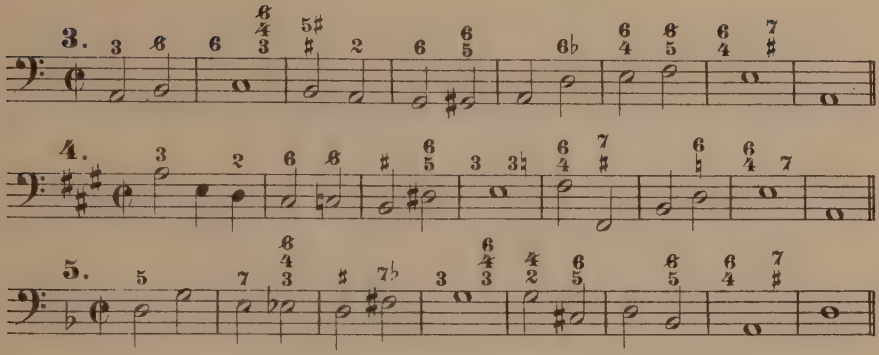
— I — V_7 | I $II^{\circ}{}_{(7)}$ | I V_7 | I

Application.

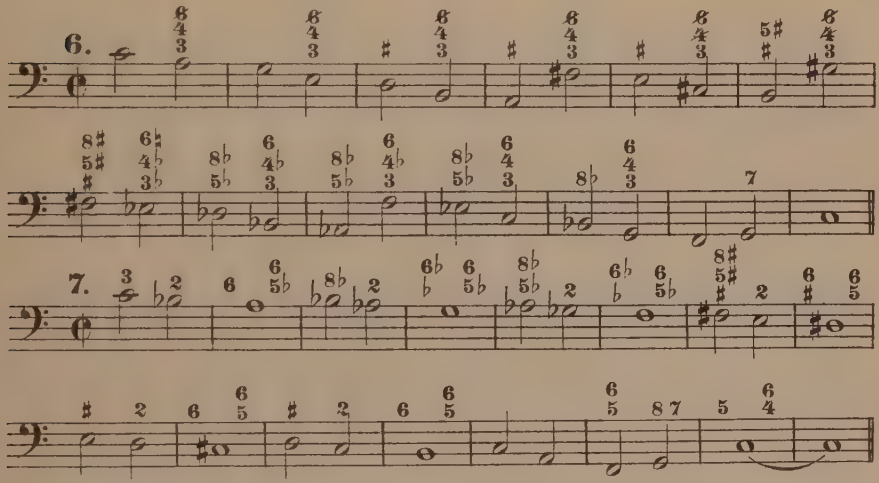


As an additional incentive to the accurate and intelligent memorizing of the foregoing forms and those which appear later, it may be remarked that committing to memory any one musical phrase is of the greatest assistance in remembering others. These exercises will be found the best preparation for learning any compositions "by heart"; such works being easily memorized, a phrase at a time, beginning always with extremely simple and melodious productions. This exercise may be profitably combined with those on modulation. No. 1 contains a somewhat free treatment of the $VII^{\circ}{}_{7^0}$ and $\frac{6+}{\frac{4}{3}}$ chords.





Nos. 6 and 7, following, may be regarded as instrumental. They modulate through every major key, No. 6 by fifths, No. 7 by fourths.



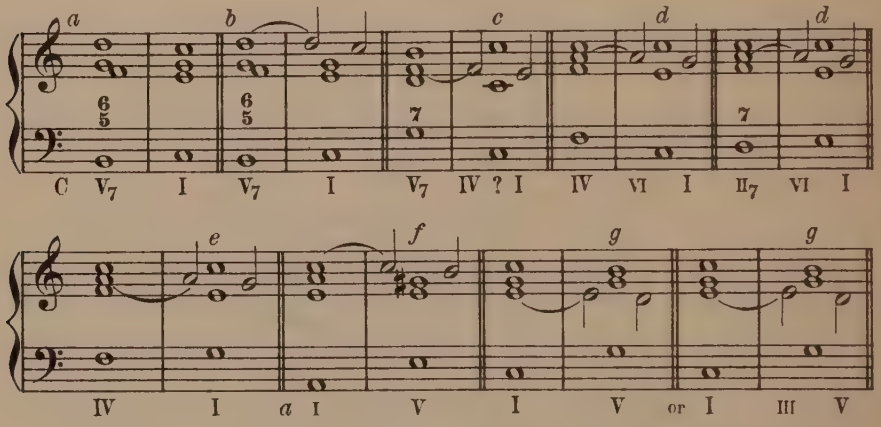
LESSON 29.

SUSPENSIONS.

When any part of a chord is prolonged into the following chord *to which it does not otherwise belong*, it forms a dissonance requiring a resolution. These prolonged notes necessarily delay a part of the chord in which they appear: if they are higher than the notes which they displace, progressing downward in their resolution, they are called *suspensions;* if lower, resolving upward, they are called *retardations* (or "suspensions upward," inverted suspensions). Retardation will be explained hereafter. That part of a chord, the entrance of which is delayed by the suspension, is said to be suspended; therefore when any note is suspended, *that note is not written until later,* when the proper signs call for it. A suspension presupposes a dissonance in all but a few cases to be hereafter

illustrated. Any note of a chord may be suspended, if prepared and if it form a dissonance; and several suspensions may properly occur at the same time.

At *a,* in the illustrations below, appears the regular progression: at *b,* the soprano being prolonged, forms a suspension of the root in the next chord, where D is the suspension and C its resolution. (C is *suspended* or delayed but D is the *suspension* — the cause of the delay.) When the 5th of a triad is omitted, the suspension or delay of its 3rd cannot form a dissonance but appears rather as another triad without its 3rd, as shown at *c,* which is of questionable propriety though used by reputedly good writers. Such examples are less musical in long notes or a slow *tempo;* while the opposite of these, leaves no cause for criticism. For the same reason, the delay of the 5th in a triad with no other suspension really forms another chord, as at *d,* and is never a dissonant suspension except with the 5th in the bass, as at *e,* or in the dominant triad of a *minor* key as at *f.* The example at *g* is by some regarded as a suspension, by others as two separate triads.



The fact that certain chords most frequently appear in certain forms of arrangement (position or inversion) as explained in Lesson 43, affords the only ground for regarding such cases as at *d* and *g* above, true suspensions; while treating them (as here marked) as forming separate chords will be found, by most students, much simpler at this stage of their progress.

For convenience of future reference, the most used combinations of figuring for suspensions are here given; but the student should attempt to learn only those that occur in each exercise and not all at once. These numerals should be read horizontally — that at the left denoting the suspension and that at the right, its resolution.

It will be observed that there is often a great difference in the significance of numerals when standing over but one bass note and when over two. For example:— $\frac{6}{5}$ standing alone denotes the first inversion of a 7th chord; but $\frac{6}{5}\frac{-}{4}$ standing over the same note would call for a triad having its 5th in the bass with its root suspended. Likewise, 7 6 over a single bass note would not denote two chords, but only a triad with its 3rd in the bass and its root suspended. A suspension and its resolution in the bass require, of course, two notes in that part.

Definitions of Figuring in Suspensions.

$\frac{9\,8}{}$ denotes a triad, root in bass, root suspended.

$\frac{7\,6}{}$,, 3rd ,, root ,,

$\frac{6}{5\,4}$,, 5th ,, root ,,

$\frac{5}{4\,3}$,, root ,, 3rd ,,

$\frac{9\,8}{6}$,, 3rd ,, 3rd ,,

$\frac{7\,6}{4}$,, 5th ,, 3rd ,,

$\frac{6\,5}{3}$,, root ,, 5th ,,

$\frac{6\,5}{\sharp}$,, root ,, 5th ,,

$\frac{6}{6}$ $\frac{}{4\,3}$,, 3rd ,, 5th ,,

$\frac{9\,8}{6}$ $\frac{}{4}$,, 5th ,, 5th ,,

$\frac{9\,8}{4\,3}$,, root ,, root and 3rd suspended.

$\frac{9\,8}{7\,6}$,, 3rd ,, root ,, 3rd ,,

$\frac{8}{7\,6}$ $\frac{}{5\,4}$,, 5th ,, root ,, 3rd ,,

$\frac{9\,8}{6\,5}$ $\frac{}{3}$,, root ,, root ,, 5th ,,

$\frac{8}{7\,6}$ $\frac{}{4\,3}$,, 3rd ,, root ,, 5th ,,

$\frac{9\,8}{6}$ $\frac{}{5\,4}$,, 5th ,, root ,, 5th ,,

$\frac{8}{6\,5}$ $\frac{}{4\,3}$,, root ,, 3rd ,, 5th ,,

$\frac{9\,8}{6}$ $\frac{}{4\,3}$,, 3rd ,, 3rd ,, 5th ,,

$\frac{9\,8}{7\,6}$ $\frac{}{4}$,, 5th ,, 3rd ,, 5th ,,

$\frac{9\,8}{6\,5}$ $\frac{}{4\,3}$,, root ,, root, 3rd and 5th suspended.

$\frac{9\,8}{7\,6}$ $\frac{}{4\,3}$,, 3rd ,, root, 3rd ,, 5th ,,

$\frac{9\,8}{7\,6}$ $\frac{}{5\,4}$,, 5th ,, root, 3rd ,, 5th ,,

$\frac{9\,8}{7}$ denotes chord of the 7th, root in bass, root suspended.

$\frac{7\,6}{5}$,, 3rd ,, root ,,

$\frac{6}{5\,4}$ $\frac{}{3}$,, 5th ,, root ,,

$\frac{6}{4}$ $\frac{}{3\,2}$,, 7th ,, root ,,

$\frac{7}{4\,3}$,, root ,, 3rd ,,

$\frac{7\,6}{4}$ $\frac{}{3}$,, 5th ,, 3rd ,,

$\frac{6}{5\,4}$ $\frac{}{2}$,, 7th ,, 3rd ,,

$\frac{7}{6\,5}$,, root ,, 5th ,,

$\begin{matrix}6\\5\\4\\3\end{matrix}$ denotes chord of the 7th, 3rd in bass, 5th suspended.

$\begin{matrix}7\,6\\4\\2\end{matrix}$ „ 7th „ 5th „

$\begin{matrix}9\,8\\7\\4\,3\end{matrix}$ „ root „ root and 3rd suspended.

$\begin{matrix}7\,6\\5\,4\\3\end{matrix}$ „ 5th „ root „ 3rd „

$\begin{matrix}6\\5\,4\\3\,2\end{matrix}$ „ 7th „ root „ 3rd „

$\begin{matrix}7\,6\\5\\4\,3\end{matrix}$ „ 3rd „ root „ 5th „

$\begin{matrix}7\,6\\4\\3\,2\end{matrix}$ „ 7th „ root „ 5th „

$\begin{matrix}7\\6\,5\\4\,3\end{matrix}$ „ root „ 3rd „ 5th „

$\begin{matrix}7\,6\\5\,4\\2\end{matrix}$ „ 7th „ 3rd „ 5th „

$\begin{matrix}7\,6\\5\,4\\3\,2\end{matrix}$ „ 7th „ root, 3rd and 5th suspended.

When a suspension occurs in the bass, as in any other voice, the suspension is one degree higher than the note that is suspended.

$\begin{matrix}4\\4\\2\end{matrix}$ denotes a triad with a suspension of its root in the bass.

$\begin{matrix}5\\2\end{matrix}$ „ „ 3rd „

$\begin{matrix}6\\4\\2\end{matrix}$ denotes a 7th chord with a suspension of its root in the bass.

$\begin{matrix}5\\4\\2\end{matrix}$ „ „ 3rd „

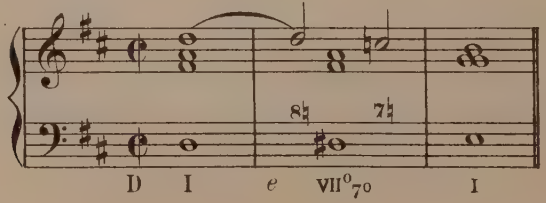
$\begin{matrix}5\\3\\2\end{matrix}$ „ „ 5th „

$\begin{matrix}5\,7\\4\,3\end{matrix}$ denotes a triad, root in bass, 3rd suspended and the 7th introduced at the same time with the resolution of the suspension.

$\begin{matrix}6\\6\,5\\4\,3\end{matrix}$ denotes a triad, 3rd in bass, 5th suspended and the 7th introduced with the resolution of the suspension.

A few other combinations of suspensions are possible in vocal music, and still more in free instrumental compositions; but the list already given embraces, beside those most used, very many that are somewhat rarely met with. Although but a part of these occur in the exercises, the student will meet them, here and there, in miscellaneous works.

As the only higher note that could suspend or delay the 7th would be an octave and therefore no dissonance, the sense of suspense would not result. Consequently the 7th can never be suspended save when the suspension itself is a diminished octave, thus: —



Rules for Suspensions.

1. Suspensions must be prepared and resolved.

2. Both the suspension and its resolution must occur in the same voice.

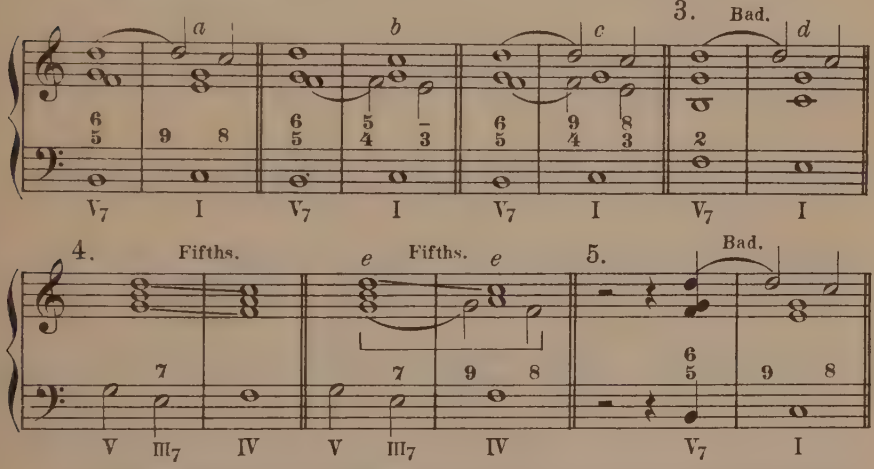
3. A suspension and its resolution, or any octave of its resolution, must not occur at the same time, except with a lower octave of its resolution in the bass and the suspension at least one octave distant.

Note. The bass and tenor are sometimes allowed to disregard the last part of Rule 3.

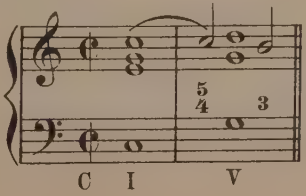
4. Suspensions neither prevent nor correct consecutive fifths or octaves that would occur without the suspension. In other words, if only a suspension stands between two fifths, or two octaves, they are to be regarded as consecutive, as though nothing stood between.

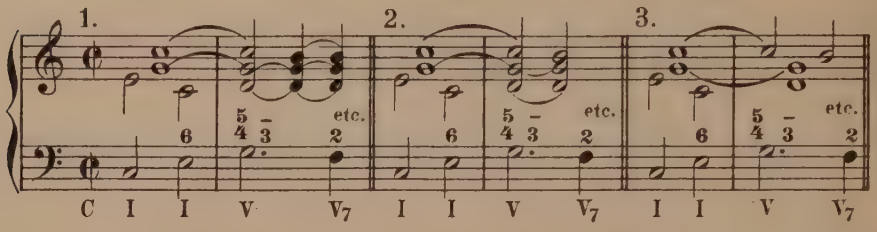
5. The suspension may sometimes be shorter, but never longer, than its preparation.

The chords are named as though there were no suspension.

1 and 2 and *last* part of 3.

At *a*, D is prepared and resolved in the same voice: the same is true of F at *b*. At *c* are shown two suspensions at once. At *a* and *c*, the suspension D properly occurs at the same time with a lower octave of its resolution, C, *in the bass*. At *d*, the lower octave of the resolution, C, coming *in the tenor* at the same time with the suspension D, violates Rule 3. At *e*, no further explanation is needed. All the foregoing illustrate the first part of Rule 5. At 5 is shown its violation.

The first part of Rule 1 is frequently violated by beginners, somewhat as follows, the first C being in the soprano, and therefore in no sense a preparation for the suspension in the alto.

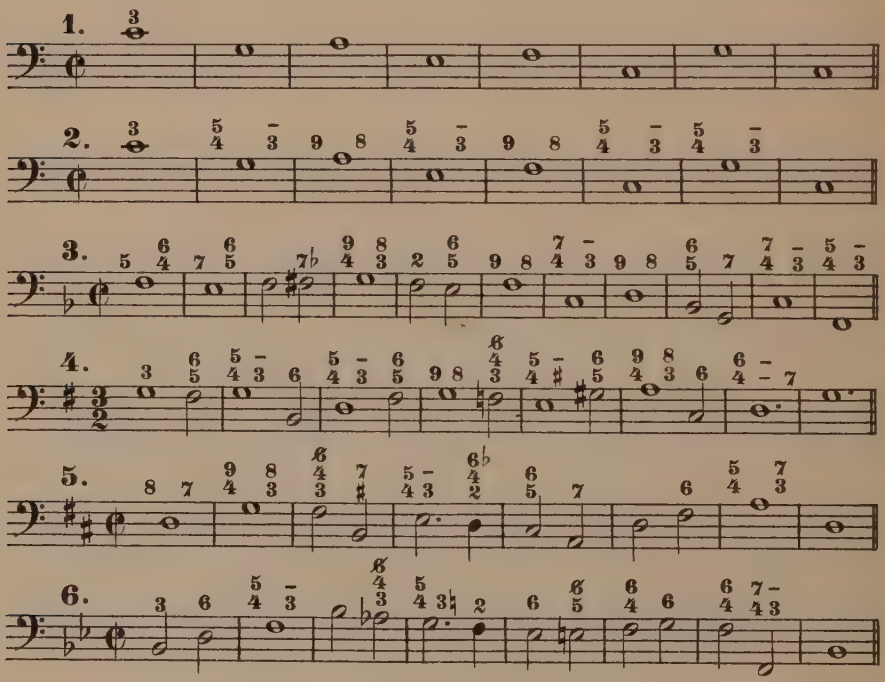


With $\frac{5}{4}\frac{-}{3}$, the fifth above the bass must always be written. With consecutive numerals over a dotted half note, the first chord must never be less than a half note. In such a case, either of the following notations is correct, though the last is most common.

In the first few exercises, *if really easier for the student,* the whole notes of each bar may be written as two half notes, and tied; but this should be given up as soon as possible.

The second exercise shows the effect of introducing suspensions into the first.

One should not forget to mark the modulations.

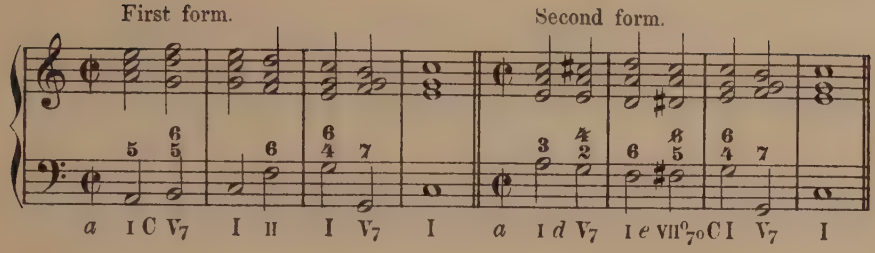
$\frac{5}{4}\frac{7}{3}$ is equivalent to $\frac{8}{4}\frac{7}{3}$.



The student should begin in each minor key and modulate to its relative major, using either of the following forms.

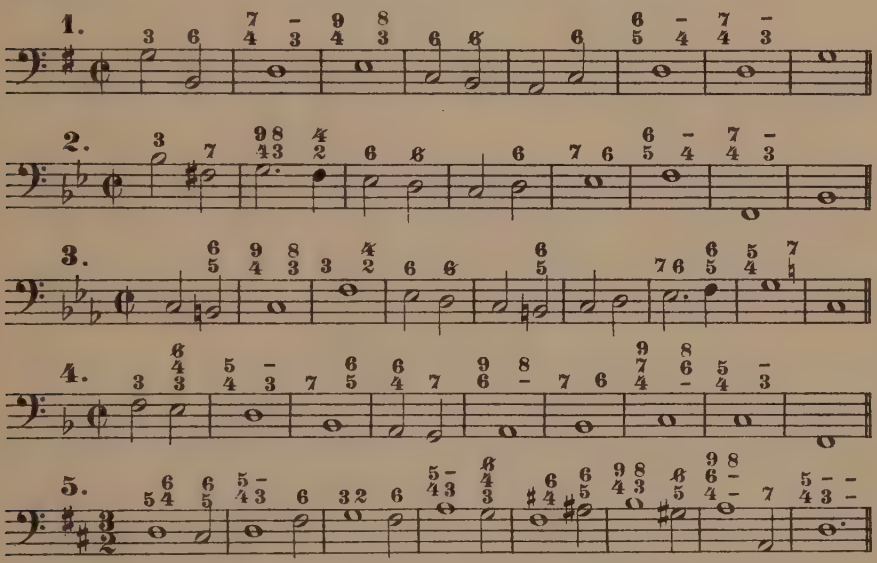
From a minor to its relative major.

— i — V_7 | i $\text{II}_{(7)}$ | i V_7 | i or — i — V_7 | i — $\text{VII}^{\circ}{}_{7}{}^{0}$ | — i V_7 | i



LESSON 30.

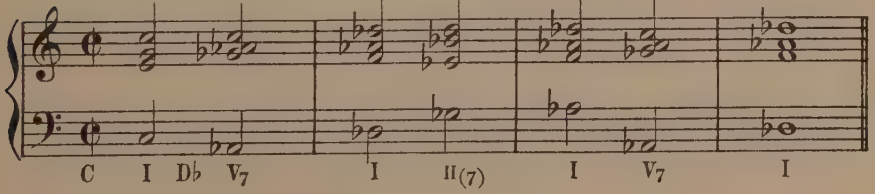
Only *one* chord is denoted by 7 6 when these numerals are over but one bass note.

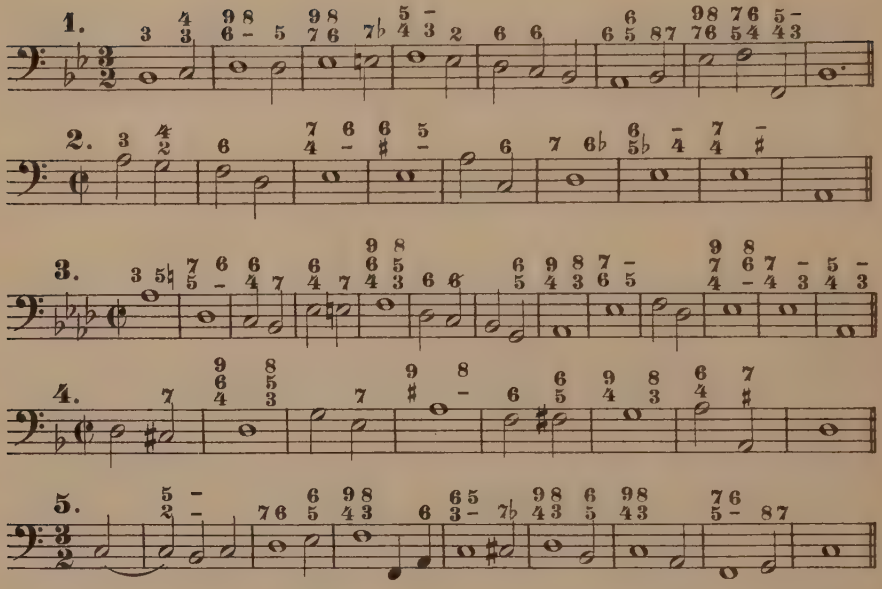


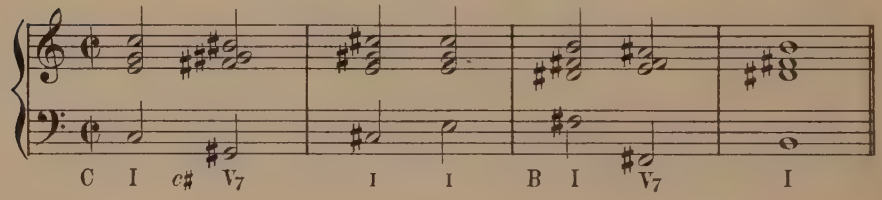
Commit to memory and play the following modulation, beginning in every major key. Learn first the formula below the chords.

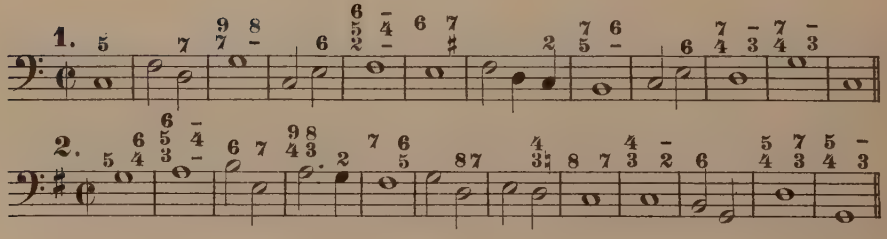
The student can easily supply the Arabic numerals if he choose.

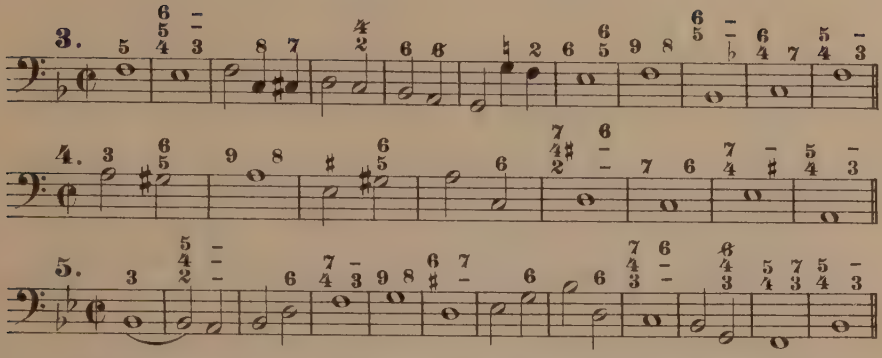
Up a half step — major to major.



LESSON 31.

Play the following, beginning in each major key.

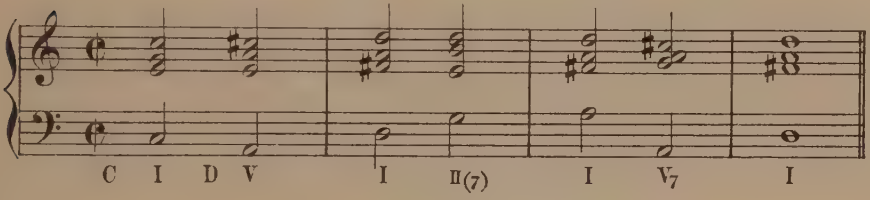
Down a half step — major to major.

LESSON 32.





Transpose this and all forms of modulation hereafter given, beginning in each major or minor key, according to the model.

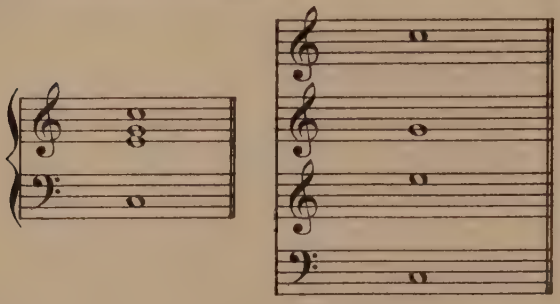
Up one step — major to major.



LESSON 33.

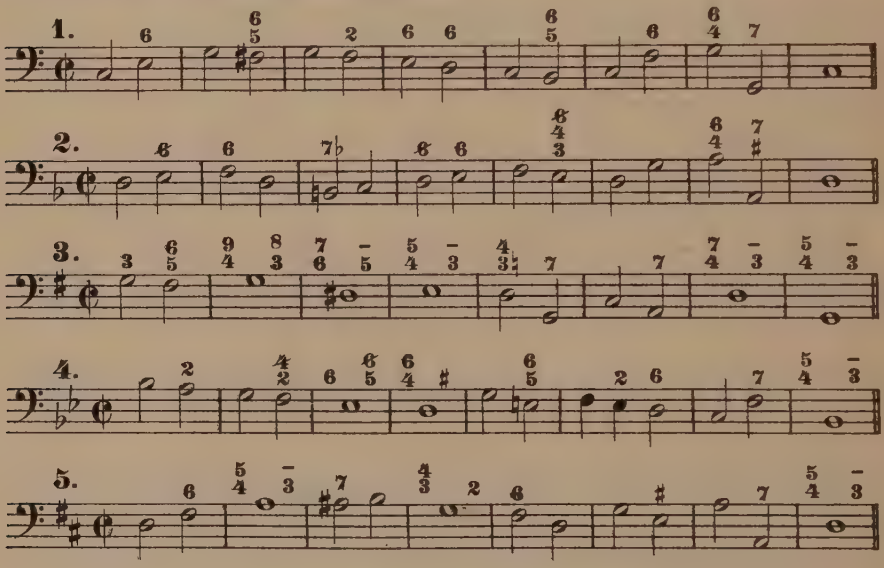
Close score (short score, or piano score) is the form of notation hitherto employed in these lessons. *Full score* presents each voice on a separate staff and is used to avoid confounding the voices with one another in writing or performing. Only one arrangement should be employed; that which places the voices in their natural order from the bass upward, with the soprano the highest. Writing the soprano immediately above the bass cannot be too strongly condemned, affording as it certainly does, great temptation for a superficial player either to guess what the other two voices may be, or, still worse, to improvise them, guided only by his ear and a certain feeling of the fingers. In all the previous exercises, the notes would be sung or played exactly as they were written. In *full score,* when the G (violin) clef is used for the upper three voices, the tenor, only, is written one octave higher than it is played or sung. It thus appears to be written higher than the alto but is really performed below it. It often occurs that this notation produces what look like consecutive 5ths between tenor and alto or soprano; but, on re-writing the passage *as it sounds* (the tenor one octave lower) it will be found to present only consecutive 4ths and is therefore correct. For a similar reason, what the eye perceives, in this manner of writing, as consecutive 4ths between tenor and some higher voice, produces really consecutive 5ths, on being played or sung, and is therefore inadmissible.

Two notations of *the same chord* here follow, both sounding alike.

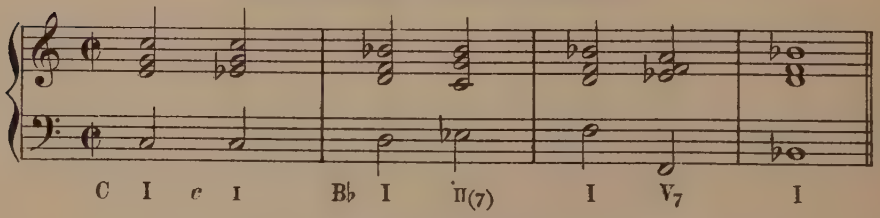


The Tenor here sounds one octave lower than it is written.

Several simple exercises here follow, to accustom the student to writing in full score, like the second notation above.



Down one step — major to major.

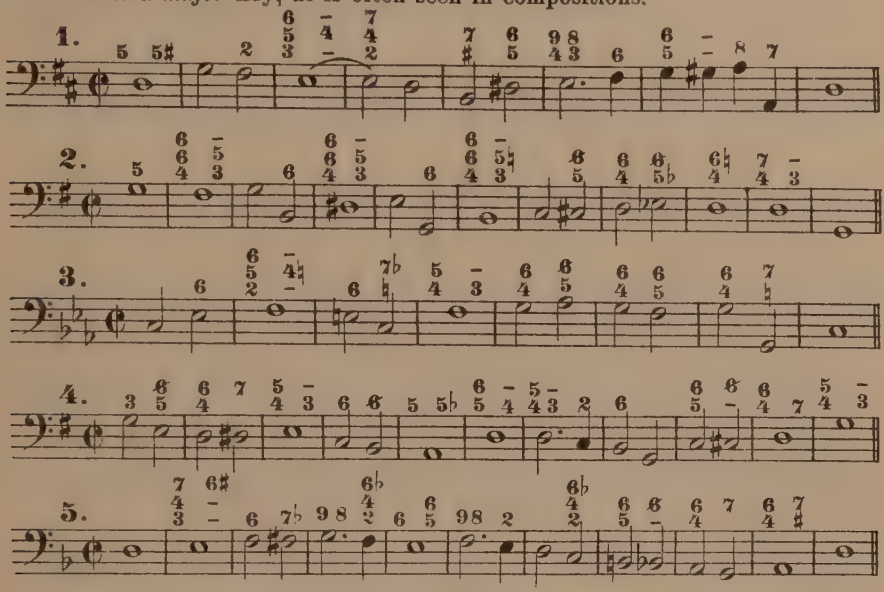


LESSON 34.

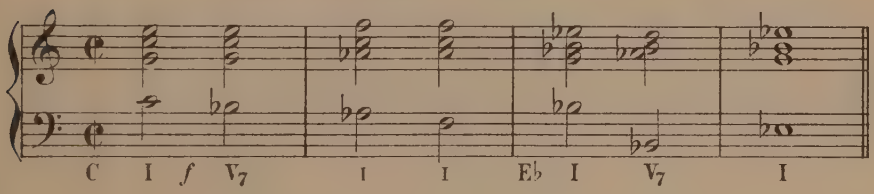
These exercises must be written in full score.

The questionable effect of $\frac{4}{2}$ as shown in the 4th bar of No. 1, is so evident as to preclude its frequent use. Attention is likewise called to the 3rd and 4th bars of No. 2, where the somewhat contradictory character of the harmonies

(cross relation) is justified by the sequence-form of the progressions. The augmented six-five chord (German 6th) in the 8th bar of No. 2, is here followed by the tonic of a *major* key, as is often seen in compositions.

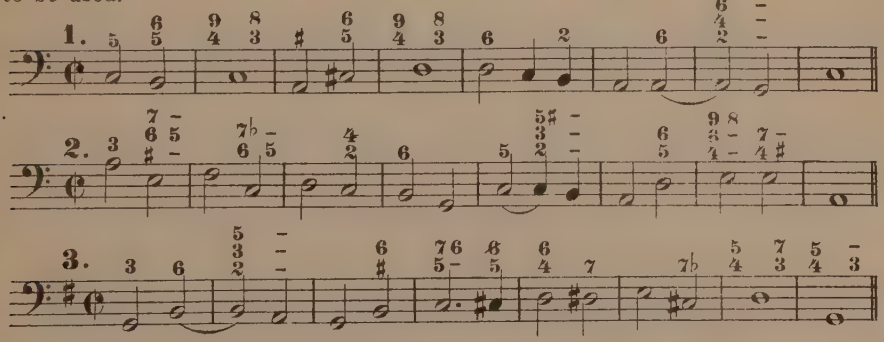


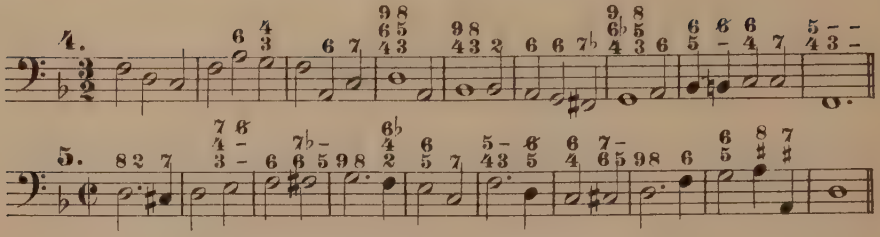
Up a minor third — major to major.



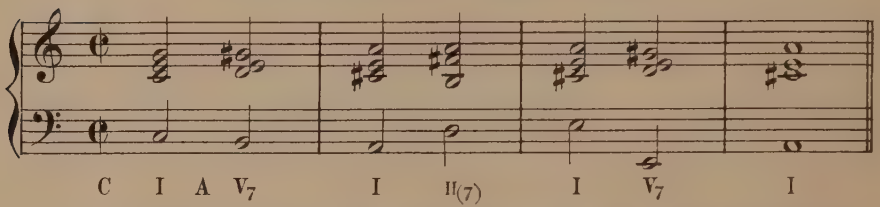
LESSON 35.

The different keys produced by merely the different notations of the diminished 7th chords in the 4th and 6th bars of No. 3 should be observed. Full score is to be used.





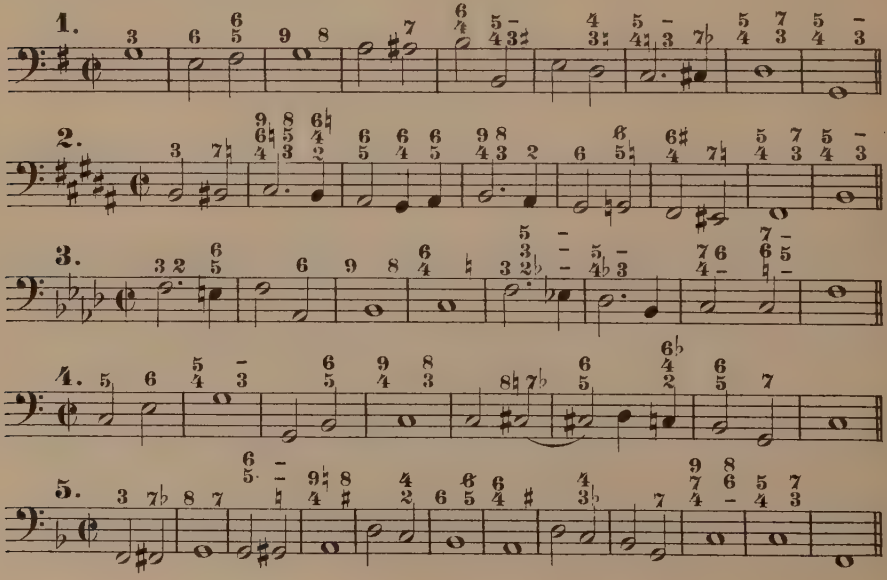
Down a minor third — major to major.

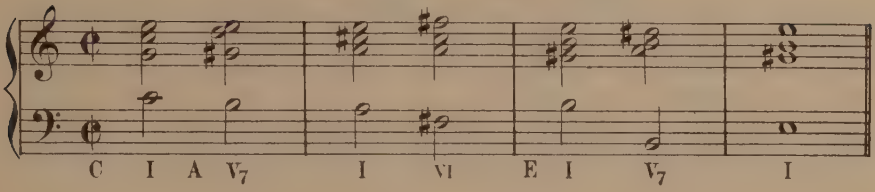


By comparing this form of modulation with that from a major to its relative minor, in Lesson 28, the student will readily see the points of similarity and of difference.

LESSON 36.

The various augmented 6th chords (aug. sixth, six-five and six-four-three chords) are believed to have first acquired their peculiar form and character as inverted chords, whence their names; and they still bear these names, even when they sometimes appear with the root in the bass, as shown in the 4th bar of No. 1. Write in full score.

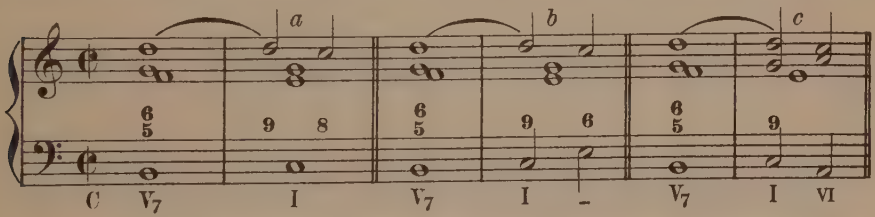


Up a major third — major to major.

LESSON 37.

Thus far, both the suspension and its resolution have stood over one and the same bass note; but it often happens that one bass note stands under the suspension and a different note under the resolution. It is immaterial whether both of these bass notes belong to the same harmony, as at *b*, or to different chords, as at *c*. In either case they must be such that the suspension finds its resolution one degree lower than itself, as before; the bass and the Arabic numerals being such as to render this certain. As the right hand numeral indicates the resolution of the suspension, if only the left hand numeral appears, the resolution does not follow over the same note, nor until something in or over the bass expressly calls for it. Hence one may infer that

9 denotes a triad, root in the bass, root suspended and not resolved until over the next bass note.

$\frac{5}{4}$ denotes a triad, root in the bass, 3rd suspended and not resolved until over the next bass note.

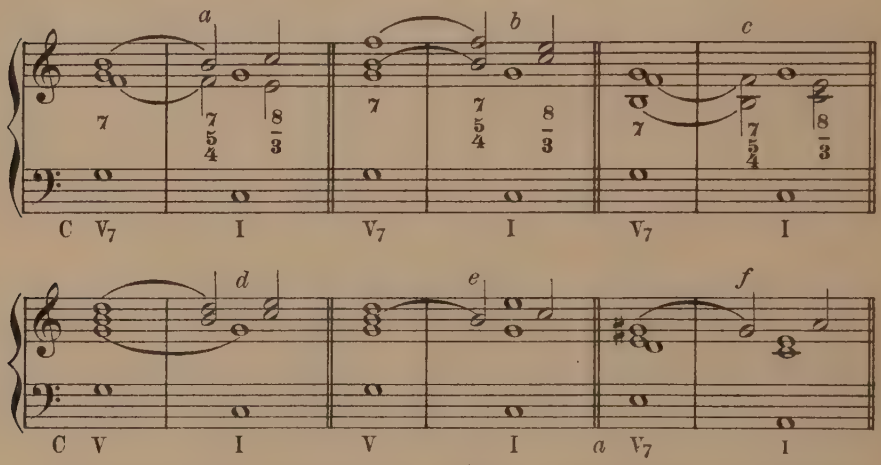
Statements similar in principle to these may be made of other figurings in suspension, where only the left hand numerals appear. The subjoined examples at *b* and *c* illustrate this. At *a* is a suspension with its usual resolution. As the 8 produces the latter when the bass remains the same under both, if the bass moves, a different numeral is requisite, as evidently no progression is proper that prevents the resolution. At *b*, the sixth above E, indicated by 6 after 9, is the same as the octave above C, at *a*, indicated by 8 after 9. D is the suspension; and C, its resolution, is produced by 8 over C, at *a*, and by 6 over E, at *b*.

Care must be taken not to write the resolution unless it is plainly called for. The bass will be such that each suspension may be resolved as before, but over the next bass note, unless the numerals denoting both the suspension and its resolution stand over the same bass, as in previous exercises.

Retardation.

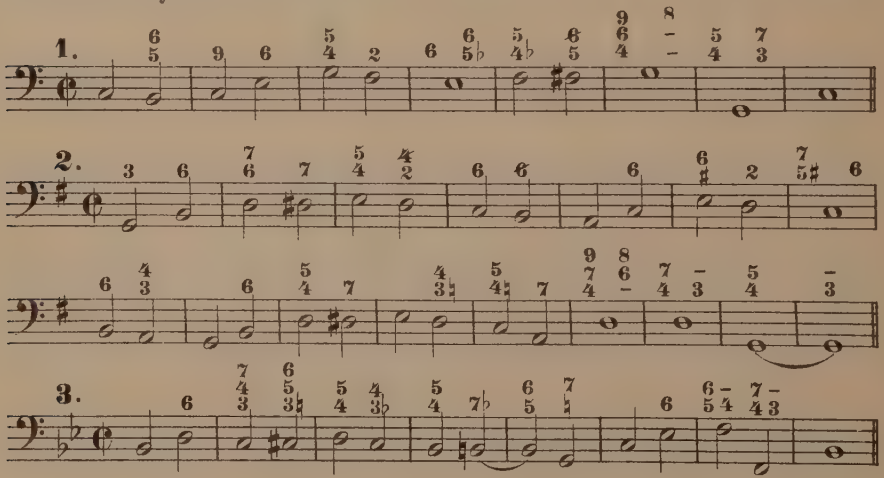
Retardation (see Lesson 29) requires substantially the same rules and treatment as suspension, except that its resolution is to the next degree above itself

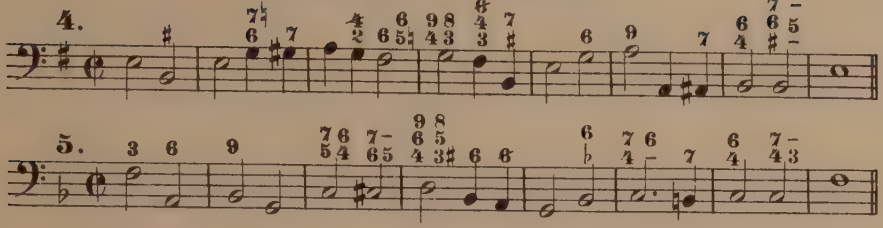
instead of below. To be effective, it should generally be used in combination with a suspension. Retardations resolving but a half step upward are more common and more agreeable than those progressing a whole step. As the numerals required to indicate retardations and suspensions combined would be necessarily very complicated, only a few exercises involving their use are given, in purely elementary exercises. The following illustrations, with the definition in Lesson 29, should be sufficient to render the subject plain, and to enable the student to recognize retardations wherever they occur in published music.

At *a*, the retardation comes in the soprano; at *b*, in the alto; and at *c*, in the tenor — each being combined with a suspension and of good effect. At *d*, occurs a double retardation — in alto and soprano — with no suspension, and the effect is less agreeable; while the single retardation at *e* would easily be mistaken for an error. The example at *f*, because of its inevitable progression, is unmistakably a retardation and cannot properly be regarded as a chord of the 7th on the tonic in *a* minor, though containing identically the same notes.

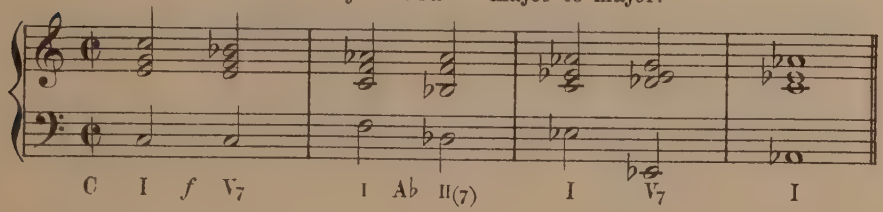


A retardation will be found in the seventh measure of the second exercise. Close score may be used.



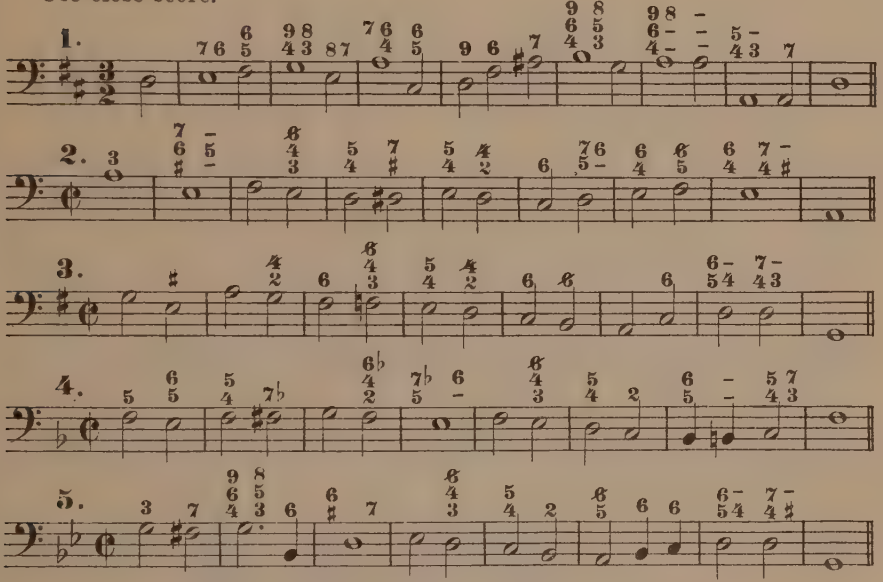


Down a major third — major to major.

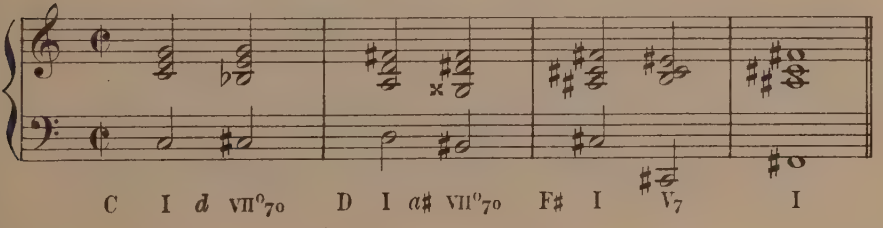


LESSON 38.

Use close score.

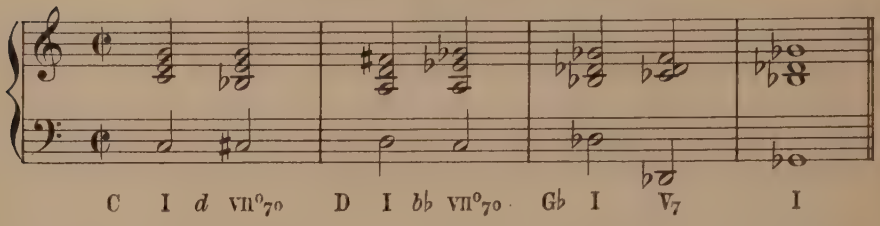


Up an augmented fourth — major to major.



The following form, having a different notation, is nevertheless the *audible* duplicate of that up an augmented fourth, and either may be substituted for the other, wherever desired.

Up an imperfect fifth — major to major.



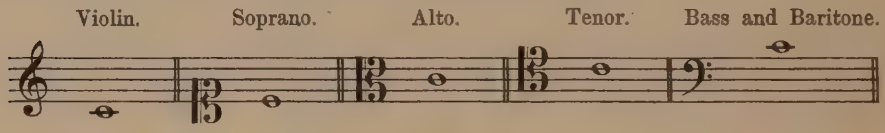
LESSON 39.

As the C clef is frequently met with in both vocal and instrumental works, no musician should fail to become familiar with its use. This clef, written in either of the following ways,

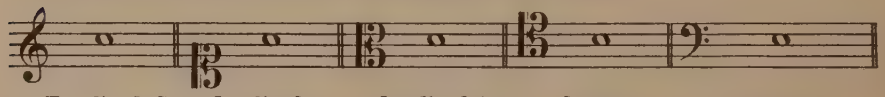
always shows the place of one-lined C (middle C).

When standing on the first line of the staff, it is called the soprano clef; when on the third line, the alto clef; and when on the fourth line, the tenor clef.

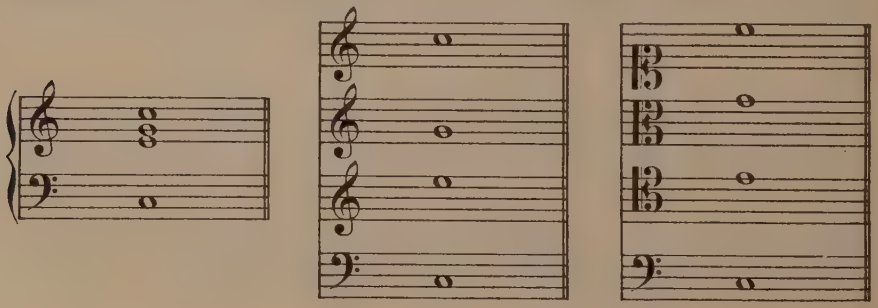
The five notes on the next staff sound exactly alike —



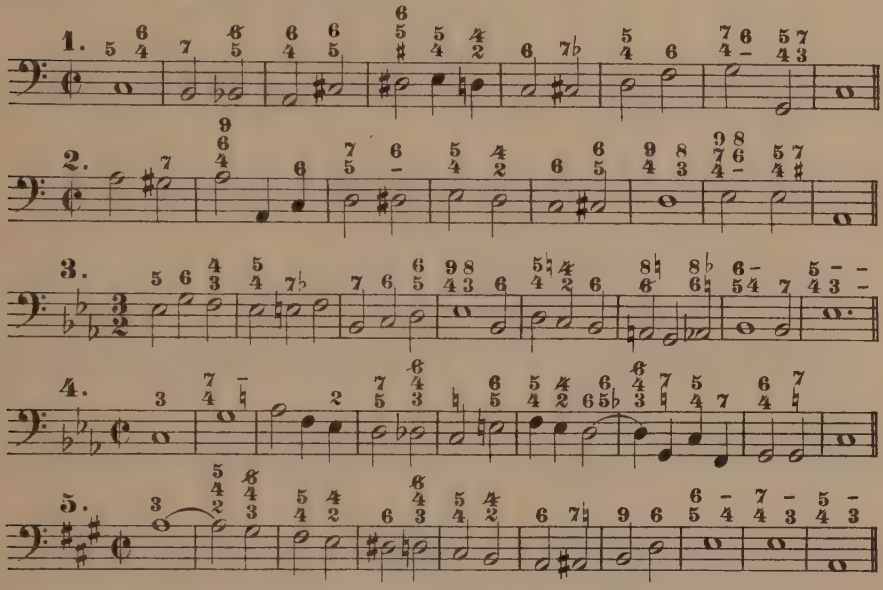
The names of the following notes appear below them.



With the C clef, the notes in any voice sound as they are written. The following shows three notations of *the same chord,* this clef requiring full score.



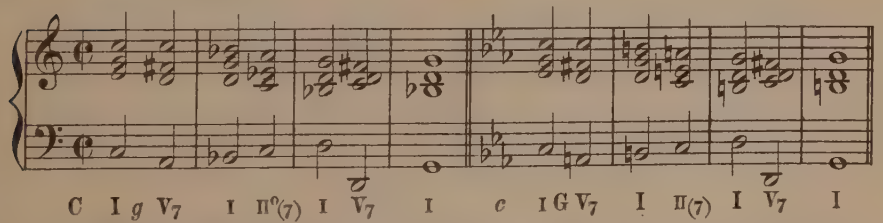
In using these clefs, the student should guard against writing the alto one octave too low. Before writing the subjoined, several exercises from Lessons 4 and 5 may be written in this way.



The forms of modulation already given should enable one to go from any one major key to any other. To go from major to minor, from minor to major, or from minor to minor, requires but slight changes in the models already given, as here shown.

Up a perfect fifth.

Major to minor. Minor to major.



By beginning the first of these two examples with the triad of *c* minor, the form *minor to minor* will readily be seen.

LESSON 40.

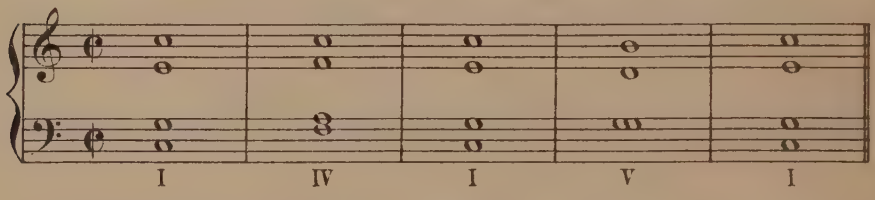
OPEN HARMONY.

Open or *dispersed* harmony has been thus long delayed that the student might become familiar with fundamental principles before applying them in this way,

which many find more difficult. One should here refer to the definition of open harmony, to be found in Lesson 4. The terms *open harmony* and *full score* must not be confounded, referring as they do to entirely different things.

Some exercises can be written in open harmony throughout, while in others, open and close harmony unavoidably intermingle: likewise, some exercises beginning with open harmony, necessarily end with chords in close position.

In exercises that are designed particularly to illustrate open harmony, this should have the preference over close, where either could be written: yet care must be exercised not to separate the alto and soprano too widely, and not to carry the tenor so low as to sound gruff. Close harmony may sometimes be changed to open, under Rule 10 in Lesson 7. Leading the soprano upward and the tenor downward, instead of the reverse, tends to produce open harmony. The first exercise in Lesson 4, written with open harmony, appears thus: —



Many of the previous exercises would prove almost unmanageable to the unaccustomed student who should attempt to write them with open harmony; but after writing the following, a judicious selection from previous lessons will serve instead of new exercises.

Rules for Open Harmony.

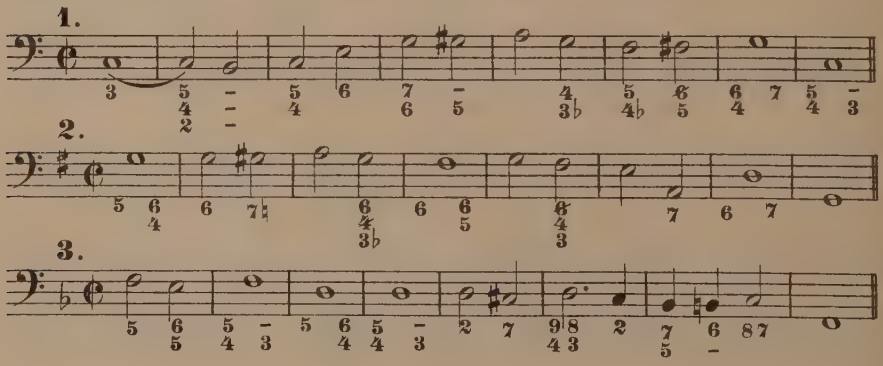
1. The tenor and alto should rarely be one octave apart; and the alto and soprano rarely over an octave.

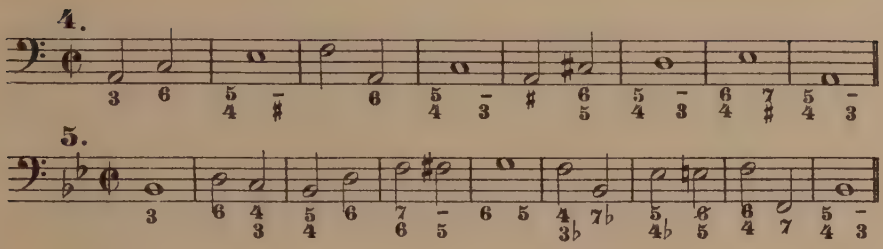
2. Write the bass and tenor on the lower staff; the alto and soprano on the upper.

3. Write down-stems to bass and alto and up-stems to tenor and soprano, wherever their rhythm differs from that of the other voices.

As the tenor here often stands where we have used the Arabic numerals, the latter will now be written below the bass. Open harmony must be employed except at points where this would render the connection of chords very imperfect.

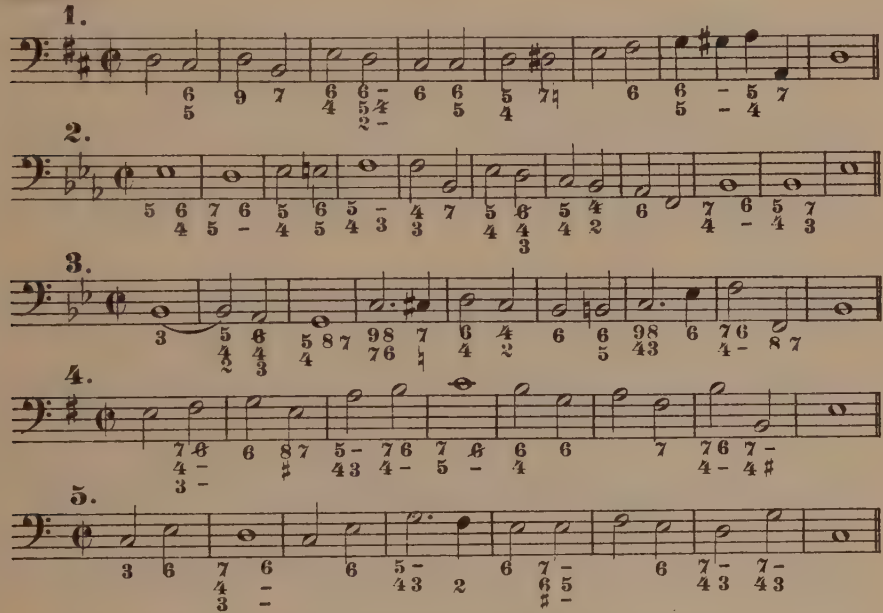
Roman numerals need not be written in Lessons 40, 41 and 42.

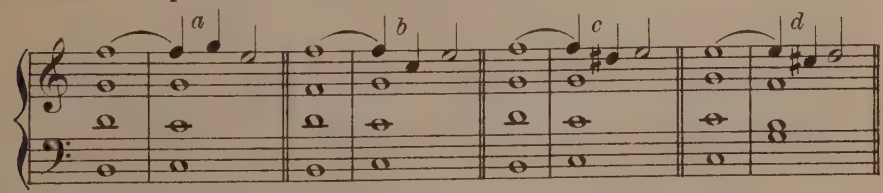




LESSON 41.

These exercises, also, are to be in open harmony, except the latter half of the second exercise and the middle of the fourth, where close harmony will be better.



A note sometimes comes between a suspension and its resolution. This intervening note may belong to the chord of the resolution, as at *a* and *b*, or it may be a foreign note, as at *c* and *d*. This freer treatment of a suspension should be reserved in practice for more advanced study.

LESSON 42.

THE APPOGGIATURA, PASSING-NOTE, ETC.

1. An *appoggiatura* is a note foreign to the chord in which it occurs, coming with the chord and, in this sense, on the accented part of the bar. See 1. *a*. A voice may skip to, but not from it, and the appoggiatura must move diatonically to some note belonging to the chord, this harmonic note not being allowed in any other voice but the bass, during the continuance of the appoggiatura. See 1. *b*.

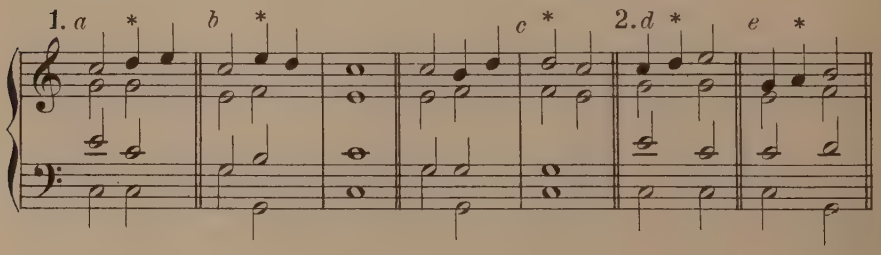
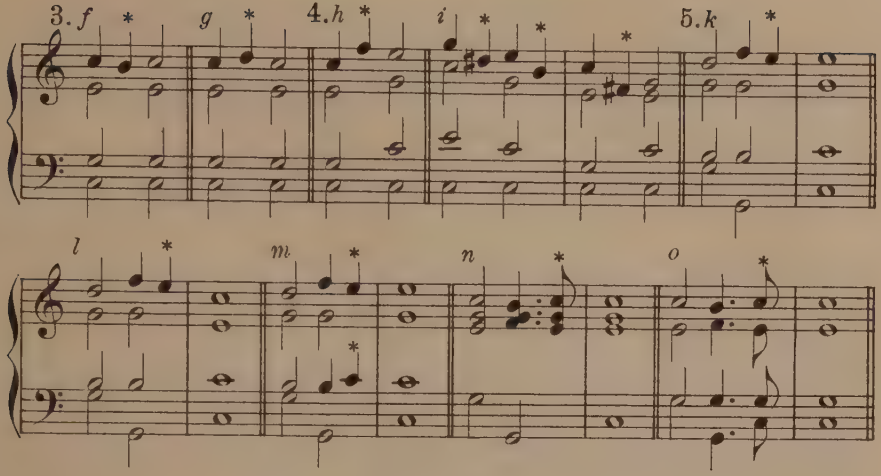
When a suspension is not tied to the note of its preparation, but is taken again — repeated — as at 1 *c*, it ceases to be technically a suspension and becomes an appoggiatura. This enables one, by omitting the tie, to make use of the *harmonic* effect of a suspension in the form of an appoggiatura, when the rhythmic value of the preparation being less than that of the succeeding dissonance, the latter could not appear as a suspension except in violation of Rule 5 under Suspensions.

Any note of a scale would be an appoggiatura if not belonging to the accompanying harmony and when coming on any accented part of the measure.

2. A *passing-note* is a note foreign to the harmony with which it is used, coming after the chord, consequently on an unaccented part of the bar, and moving diatonically from one harmonic note to another. The notes just before and after the passing-note may properly belong to one and the same chord, as at 2 *d*, or to different chords, as at *e*. The passing-note can be neither taken nor left by means of a skip.

3. A *changing-note* is quite the same in definition and treatment as a passing-note, except that it returns to the same note from which it came. See 3.

4. A *skip-note* is a variety of passing-note to which, but not from which, a voice may skip. It differs from the appoggiatura in coming after the chord, or accent, while the appoggiatura comes on the chord, or accent. See 4.

5. *Anticipation* arises when any voice takes a note of the next following chord before the full chord appears, as at 5, *k* and *l*. Double anticipations are found, as at *m*. Triple anticipations, although often presenting the full triad that follows, as at *n*, do so before the rhythm would naturally suggest it — hence the propriety of the term, anticipation, provided at least one other voice retains a note of the previous chord. When all the voices proceed thus early to the following chord, they indeed present a *rhythmic*, but not an *harmonic*, anticipation, and cease to be known under this name. See *o*.



The accented appoggiatura at *a* should be compared with the unaccented passing-note at *d*. Each of the foregoing dissonances can properly come in any voice, though here shown as in the soprano.

When any of these dissonant notes are long sustained, coming in a very slow *tempo* or on a long note, their effect is less agreeable.

Like suspensions, either passing-notes, changing-notes or skip-notes may properly appear in two, or even three voices at the same time; or one of one kind and one of another may be combined, as was shown in connection with suspension and retardation.

When such combinations as the last mentioned appear simultaneously in several voices in such a way as to form complete chords *exclusive of the bass*, they are called *passing-chords,* the intervening chords including the bass in the manner employed with the use of single passing-notes.

As passing-notes often occur in the bass, passing-chords may sometimes include the bass (consequently all four voices). But there is seldom occasion to regard such as passing-chords, when all the voices belong to the chord, except when of comparatively short rhythmic value and coming on unaccented parts of the bar, oftenest between the beats, and in certain inversions rarely found on accented parts. (See suggestions on the usual appearances of chords in Lesson 43.)

Organ-point, Pedal-point.

When a note is sustained in the bass during the performance of various harmonies to many of which the bass does not belong, this bass note is called *organ-point* or *pedal-point.* Owing to the difficulty of literally sustaining one note so very long in vocal or pianoforte music, it is there uninterruptedly repeated with greater or less frequency during the continuance of the organ-point. The chords that do not include the bass may come upon either the accented or the unaccented parts of the bar; but they must be constantly interspersed with chords containing the bass. The note selected for the organ-point is usually either the tonic or the dominant, sometimes both together. Although in free instrumental writing, other notes are used, this is somewhat exceptional and requires discretion in its employment. The bass note in organ-point must belong

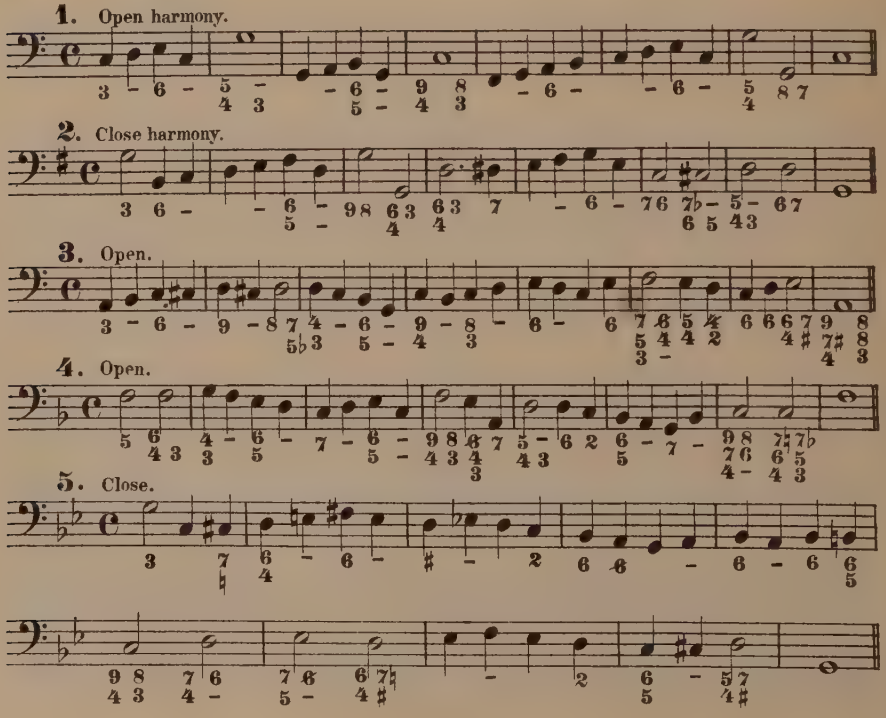
to the first chord in the passage, to the last chord, and to more than half of them all; the first of these chords usually coming on the accented beat. Organ-point is most used at the very beginning and near the close of compositions. When at the beginning, the organ-point usually continues during only a few chords: near the close, especially of great works, it is often maintained throughout a long passage, this being followed by a strong cadence.

Sustained Notes.

When a note is prolonged like organ-point in any voice other than the bass, it is called a *sustained note.* A note may be literally sustained, or tied, and yet not be a "sustained note," this term having a purely technical meaning and applying only to peculiar harmonic combinations as defined above. The chords that do not include the sustained note must be less frequent than with organ-point, if purity of effect is to be preserved. As in organ-point, the tonic and dominant are best adapted for sustained notes, though for exceptional purposes other notes are sometimes found in orchestral works.

The study of *Counterpoint* and *Composition* is indispensable to a complete understanding of principles here involved; but as the harmonizing of even simple melodies requires some practice in the proper treatment of many of these dissonances, they will be introduced in later lessons. A few examples of passing-notes and changing-notes in the bass here follow, such notes having only a dash under them, showing that the next previous notes of the upper three voices are to be held over the passing-note. See Rules in Lesson 18.

Several of these exercises require interchanges of close and open harmony; and an occasional passing-note may be used in some upper voice. A retardation occurs in the last bar of the third exercise.



Before proceeding further, it is recommended that the teacher harmonize more or less of the foregoing exercises throughout the entire book, purposely making errors to be corrected by the pupil. In no other way, it is believed, can the whole be so thoroughly reviewed and reduced to practical value. Beside thus impressing most ineffaceably the principles of Harmony, the pupil, in being obliged to explain errors as though he were the teacher, learns not only the rules, but the fundamental laws upon which they are based. Many of the exercises could be correctly written in several ways, though one might be better than any other.

LESSON 43.

HARMONIZING MELODIES.

Unless the student shall have played the corrected exercises of the foregoing lessons, or in some way become familiar with harmonic progressions, he should at once do so before writing further, as otherwise the following lessons will be almost useless if not wholly impossible to him. In this connection, a glance at the most common progressions suggests some facts which, though having exceptions, are still of very general application.

A. *The tonic triad* is much used in every position and inversion.

B. *The super-tonic triad* is of frequent occurrence, but rarely as a six-four chord, save on the unaccented part of the bar and then mostly in diatonic progressions of the bass. See Lesson 21, Rules 4 and 5.

C. *The mediant triad* occurs but seldom, comparatively, and then usually with its root in the bass when coming between the triads of the tonic and sub-dominant (I. III. IV.) or between those of the sub-mediant and sub-dominant (VI. III. IV.); but often with its third in the bass when between the triads of the tonic and dominant (I. III. V.).

D. *The sub-dominant triad* is used in any form.

E. *The dominant triad* is much used in any form except as a six-four chord. See Lesson 21, Rules 4 and 5.

F. *The sub-mediant triad* usually has its root in the bass except in introducing a modulation, when it often has its third in the bass. See Lesson 21, Rules 4 and 5.

G. *The leading-tone triad* seldom occurs except with its third in the bass and its third doubled, coming thus between two triads of the tonic, either of them being inverted. When used as a *passing-chord* (see Lesson 42) it occasionally appears in the fundamental position or as a six-four chord. In a sequence it may appear in any form.

Chords of the 7th on the various degrees of the scale, together with their inversions, appear in so many ways and are affected by so many conditions that any statements concerning them, similar to the above, would be too extended to be of practical service. The proper use of these, and indeed of all chords, can be learned only by familiarity with countless examples.

The Tritone.

The interval of three whole steps from the fourth degree of the scale upward to the seventh degree, or from the latter downward to the former, is called a *tritone.* As it is an augmented 4th, it is customary to avoid this skip (Lesson 4, Rule 5); yet among modern writers it is not regarded as erroneous, although unmelodic. One should not write it in elementary lessons.

Rules for Harmonizing a Melody.

1. With a low soprano use close harmony.

2. With a high soprano use open harmony.

3. With a soprano neither particularly high nor low, use whichever form best connects the voices.

4. All four voices should rarely *skip* at the same time, especially from one harmony to another. (See Lesson 7, Rule 10.)

5. Avoid the impure progressions of consecutive unisons, seconds, sevenths and ninths.

6. The bass should not skip consecutively two fourths or two fifths *in the same direction.*

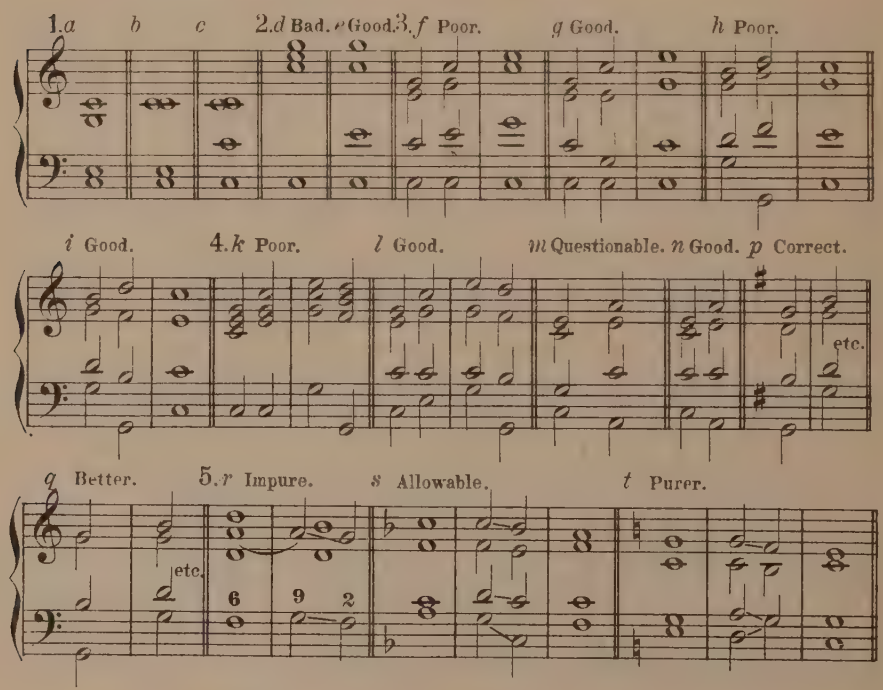
7. One should avoid the consecutive major thirds founded on the fourth and fifth degrees of the major scale, *when there is nothing below their lower notes.* (See illustration 7, following.)

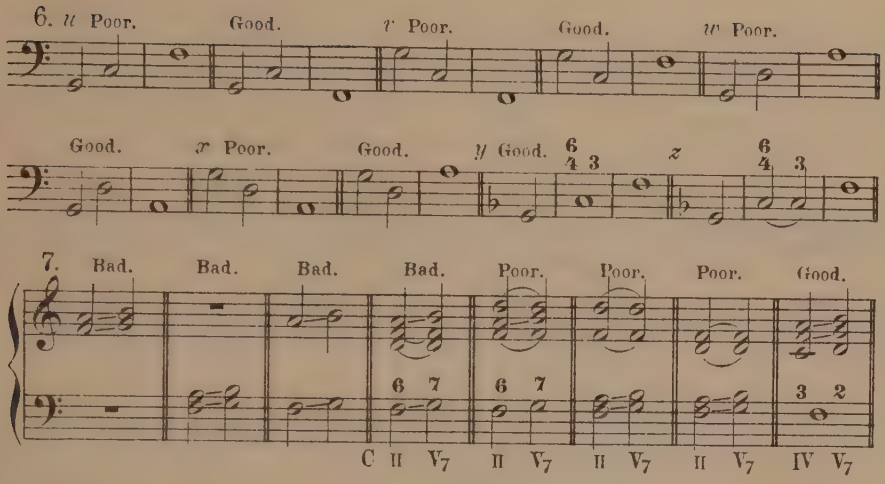
8. The chords $\frac{6}{4}_{V}$ and $\frac{6}{4}_{VII^{o}}$ should not be used.

9. { The succession of harmonies II V is good.
   { The succession of harmonies V II is poor, retrogressive.

10. { The succession of harmonies IV IV is allowable.
    { The succession of harmonies IV II is often better than IV IV.
    { The succession of harmonies II IV is seldom desirable.

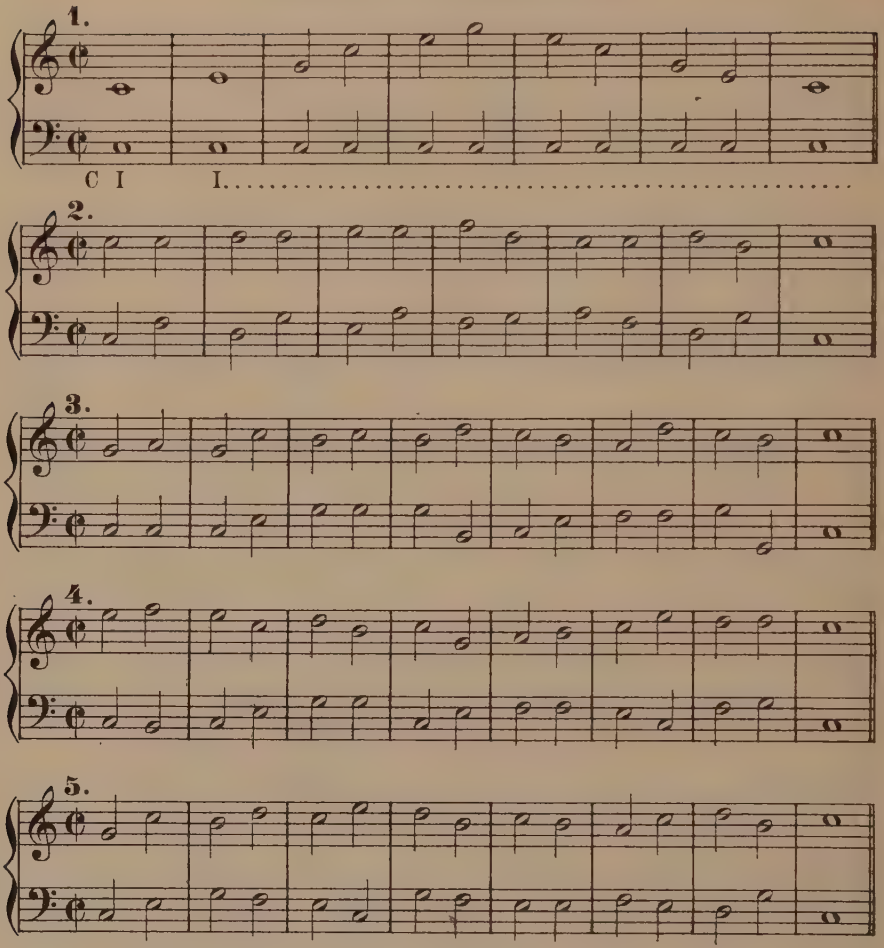
11. { With roots in the bass, the succession IV V is permissible.
    { With roots in the bass, the succession V IV is poor, retrogressive.

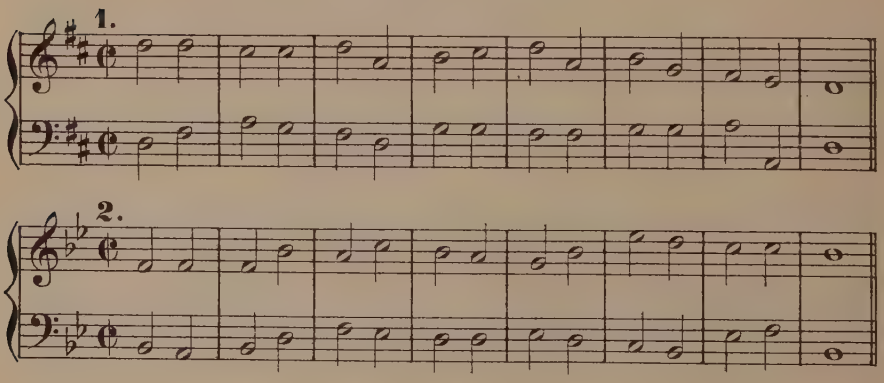
Note. The succession V IV is sometimes used when the chord V closes a phrase, or line of a hymn, and the chord IV begins a new phrase, or line.

1.a b c 2.d Bad. e Good. 3.f Poor. g Good. h Poor.
i Good. 4.k Poor. l Good. m Questionable. n Good. p Correct.
etc.
q Better. 5.r Impure. s Allowable. t Purer.
etc.
6 9 2

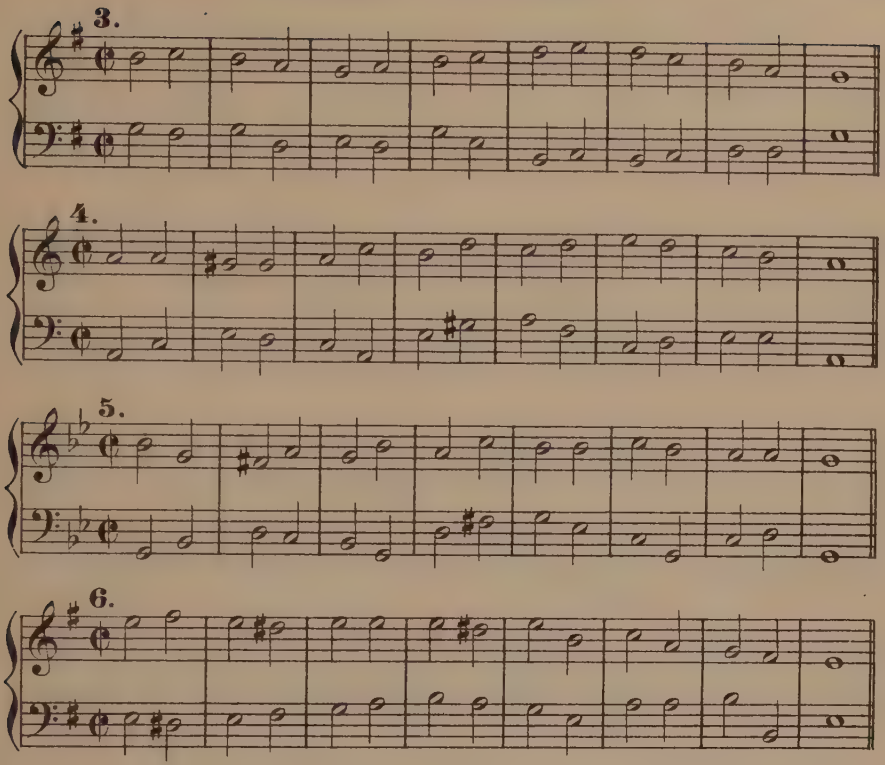


With the soprano as low as at *a, b* and *c*, the bass could not afford room for open harmony and still remain within vocal limits. The example at *c* is allowable in four voiced harmony on only the *first* note of any composition. At *d*, the tenor and alto are too high, which is remedied at *e*. At *f*, the voices are poorly distributed, the correction being shown at *g*. The lack of connection in all the voices and the poor movement of the alto at *h* is avoided at *j*. The violation of Rule 4 is plainly noticeable at *k*, as well as its natural correction at *l*; although the simultaneous skip in four voices to another position of *the same chord* is less objectionable than such a progression to different harmony, as at *m*. The correction at *n* is in conformity with Rule 10 in Lesson 7. The example at *p* scarcely violates Rule 4, as the bass does not skip to another interval of the chord; yet the form at *q* is better. At 5, *r*, the consecutive intervals between bass and alto, in consequence of the suspension, are impure and the suspension is not well chosen in such cases. At *s*, the bass is the best of which this harmony admits, in this key, although it makes more plainly audible the consecutive 7ths between tenor and soprano. The change of key at *t*, admitting of contrary motion, partially remedies this. The consecutive skips of 4ths in the same direction at *u* and *x* and of 5ths at *v* and *w*, find their correction in the examples marked Good. The example at *y* is correct, owing to the interrupted progression upward. A different notation at *z* makes this plainer.

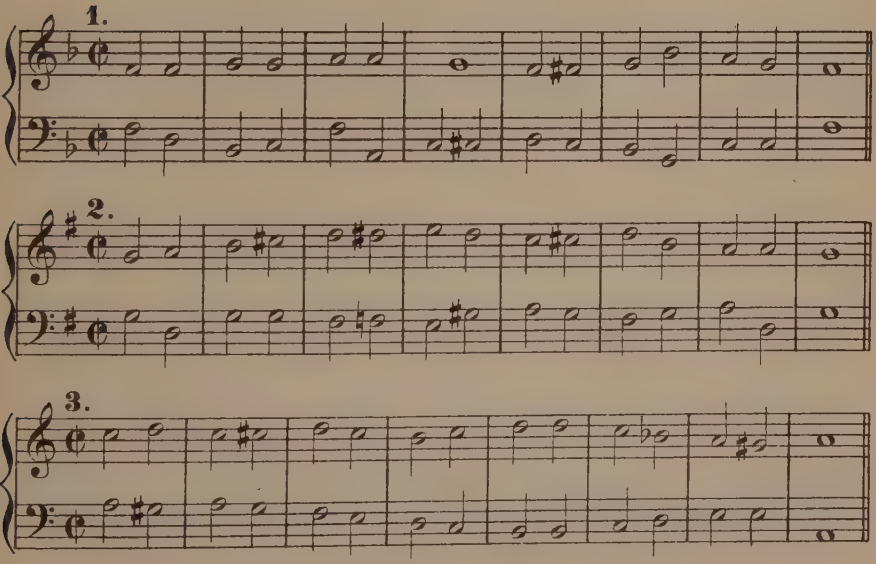
The student should first harmonize the following exercises away from any instrument, then play them over and endeavor to ascertain why certain chords or progressions sound badly, comparing them with some of the suggestions at the beginning of Lesson 43. As soon as possible, however, the exercises should be written without any reference, mental or visible, to the keyboard. Tenor and alto may now be supplied to the four following lessons, omitting the Arabic numerals but writing the proper Roman numerals beneath the chords. The student will here use triads and chords of the 7th variously interspersed as before, together with inversions of each.

The first exercise merely shows the necessity for the interchange of close and open harmony.

LESSON 44.

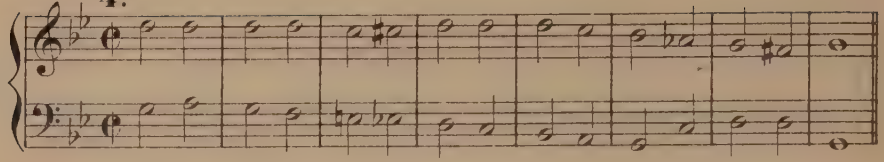




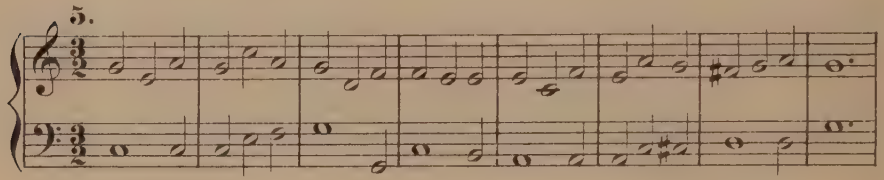
LESSON 45.

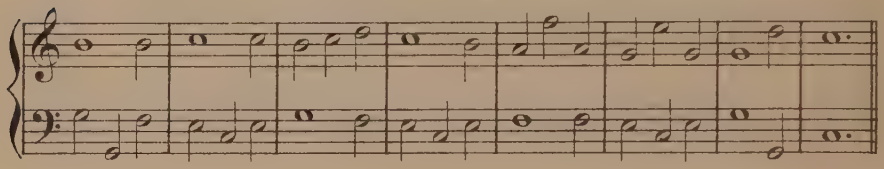


4.



5.

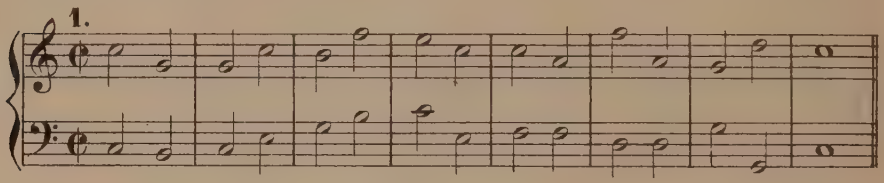




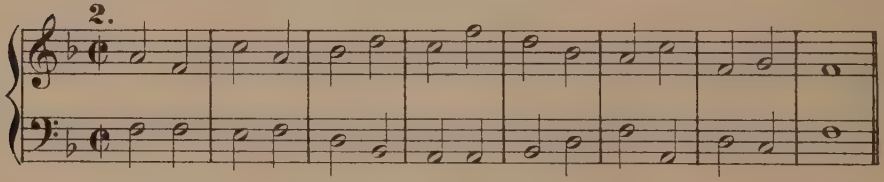
LESSON 46.

The following exercises present unusually angular sopranos, in order to test the student's skill in making the whole sound tolerably connected by means of the other voices, with a judicious interchange of close and open harmony. A soprano part so disconnected as either of these, would be hardly excusable except for this purpose.

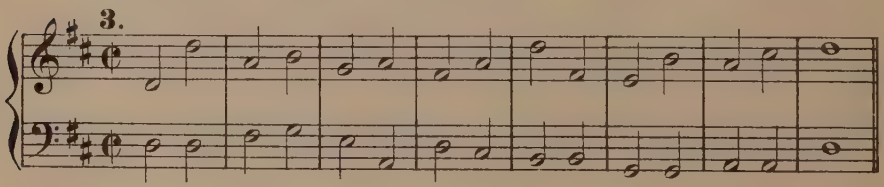
1.



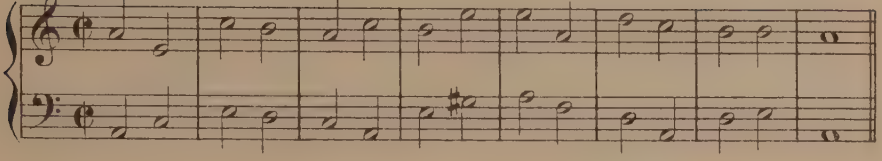
2.



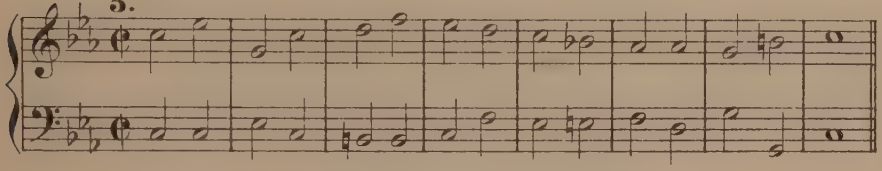
3.



4.



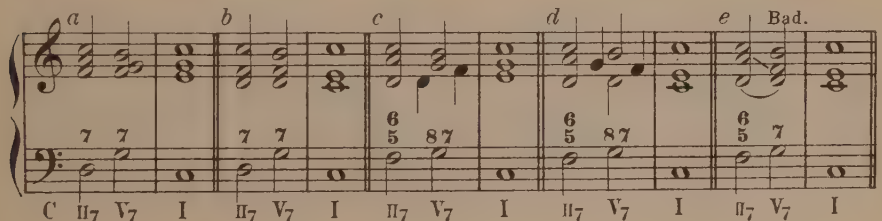
5.



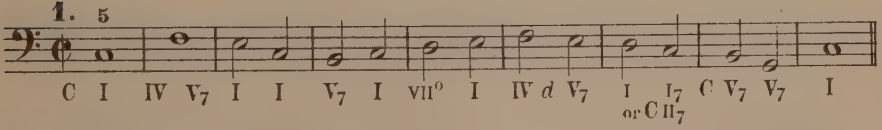
LESSON 47.

A simple lesson here follows, to accustom the student to a somewhat new use of Roman numerals. The first chord of each exercise must be written in the position denoted by the Arabic numerals. Both open and close harmony may appear in every exercise if desired.

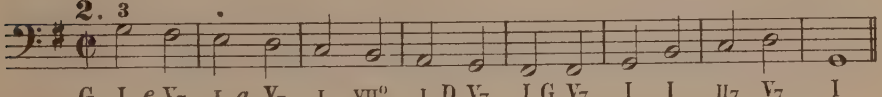
In this succession of harmonies, II$_7$ V$_7$, if each has the root in the bass, they may be written as at *a* or *b*. but if the chord II$_7$ has its 3rd in the bass, the chord V$_7$ must be written as an 8 7 chord, as at *c* or *d;* not as at *e,* which violates Rule 3 in Lesson 9.



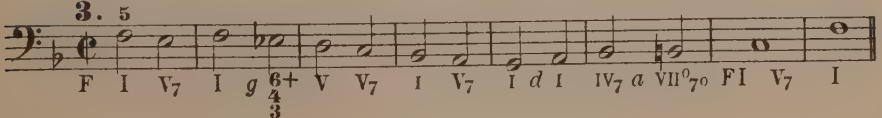
1. 5

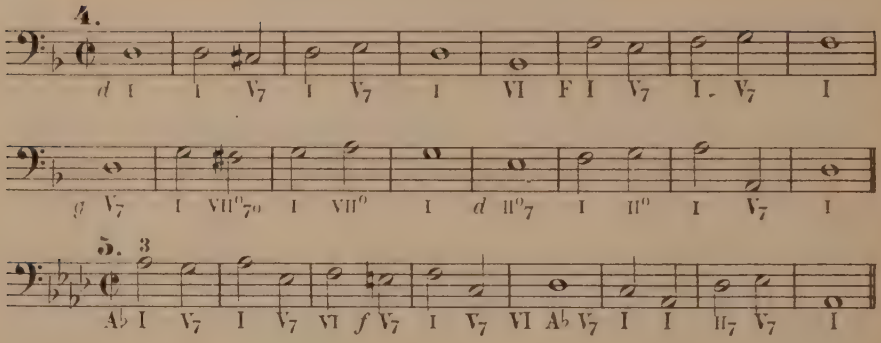


2. 3



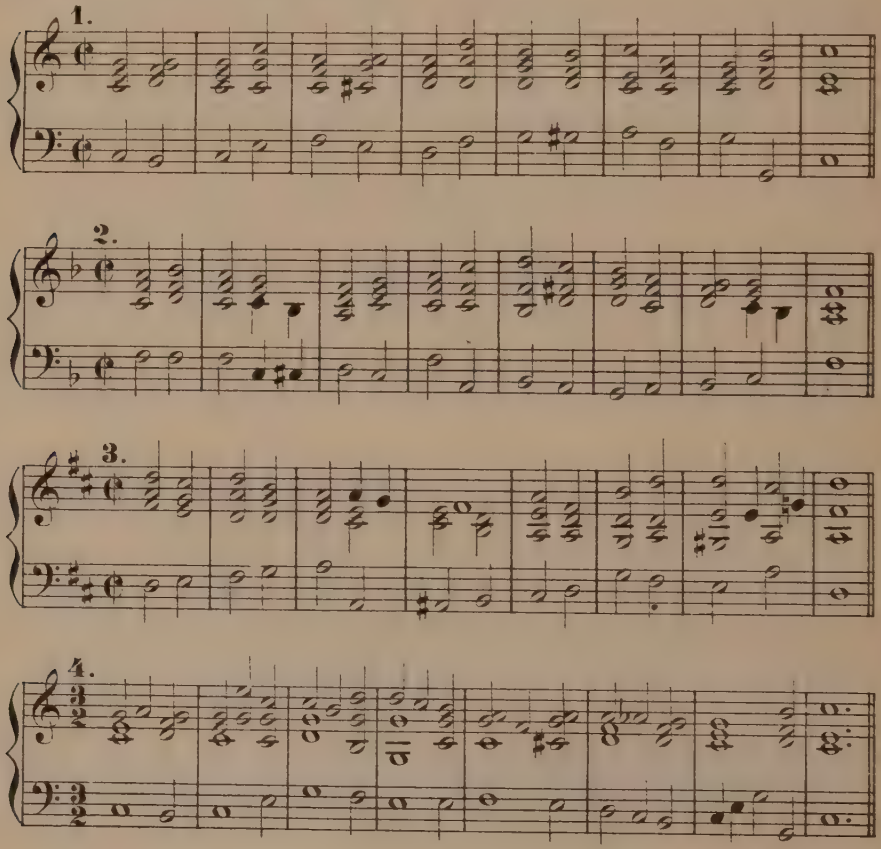
3. 5

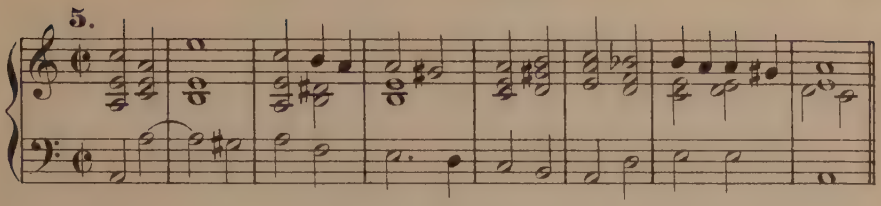




LESSON 48.

The proper Arabic numerals with the chromatic changes carefully indicated, may be written over the bass, and the Roman numerals beneath. Should this prove difficult, several vocal Chorals should be similarly treated, affording a study most useful in every respect.

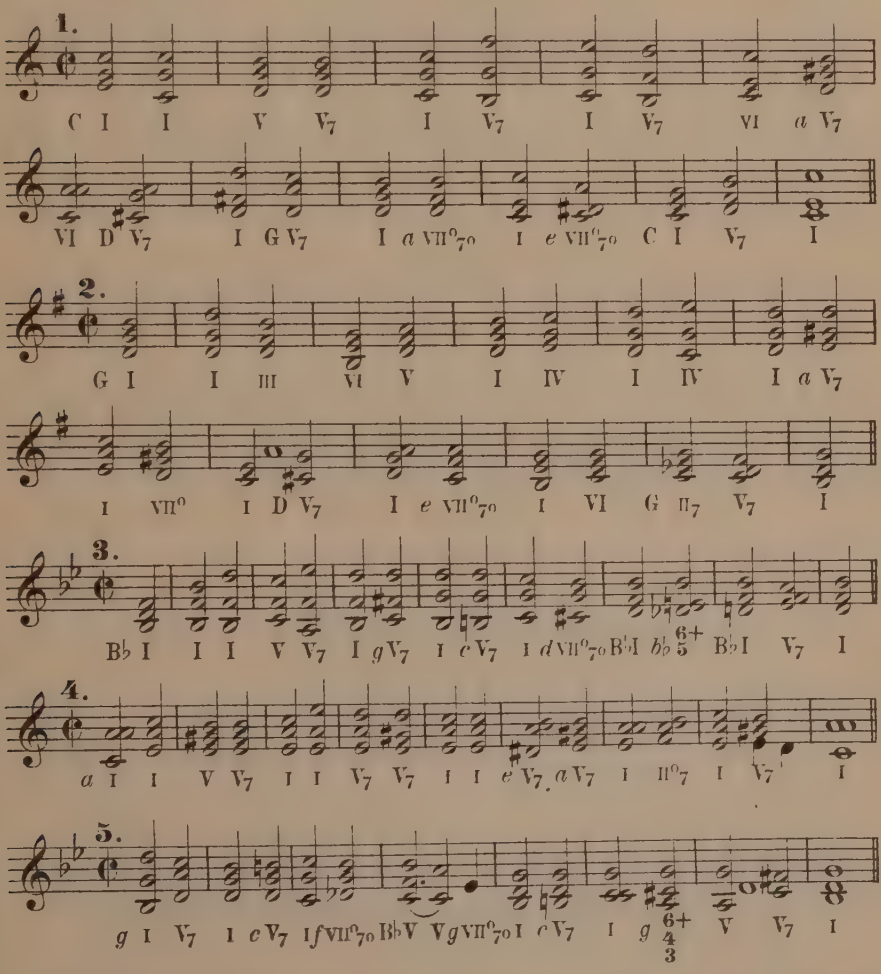




LESSON 49.

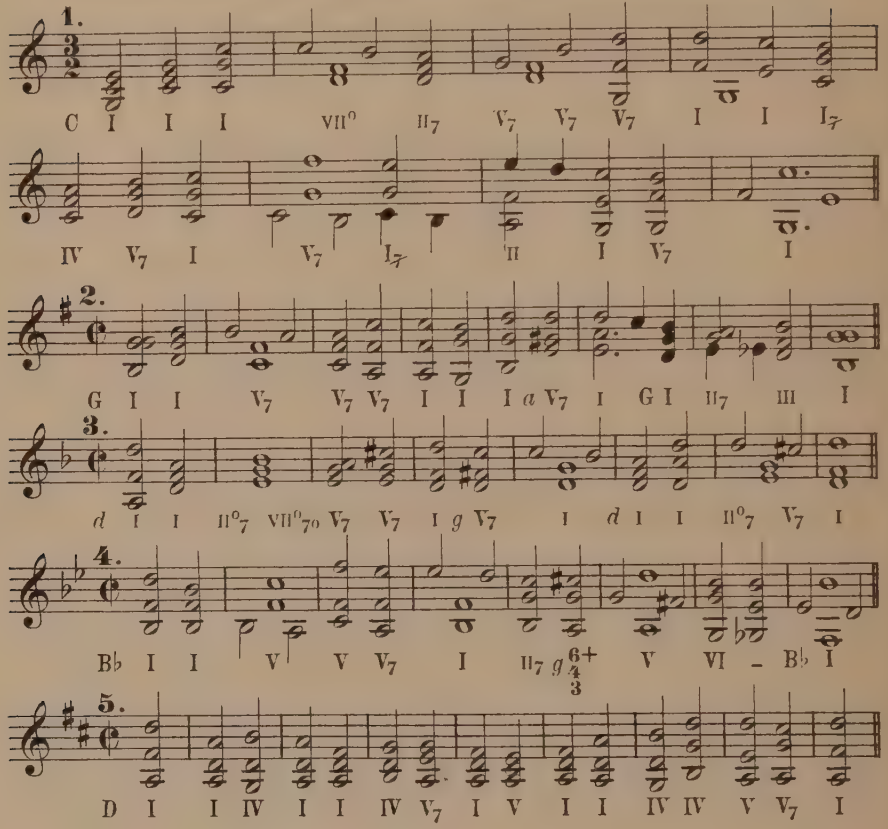
The bass with appropriate Arabic numerals should be supplied to these chords, the Roman numerals being copied below the bass staff.

Rule. When the last three chords of the exercise are I V_7 I, the first of these chords rarely has its root in the bass, but sometimes its third, or most frequently its fifth.


1.
C I I V V7 I V7 I V7 VI a V7
VI D V7 I G V7 I a VII°7 I e VII°7 C I V7 I
2.
G I I III VI V I IV I IV I a V7
I VII° I D V7 I e VII°7 I VI G II7 V7 I
3.
B♭ I I I V V7 I g V7 I c V7 I d VII°7 B♭I b♭ 6+ 5 B♭I V7 I
4.
a I I V V7 I I V7 V7 I I e V7 a V7 I II°7 I V7 I
5.
g I V7 I c V7 I f VII°7 B♭V V g VII°7 I c V7 I g 6+ 4 3 V V7 I

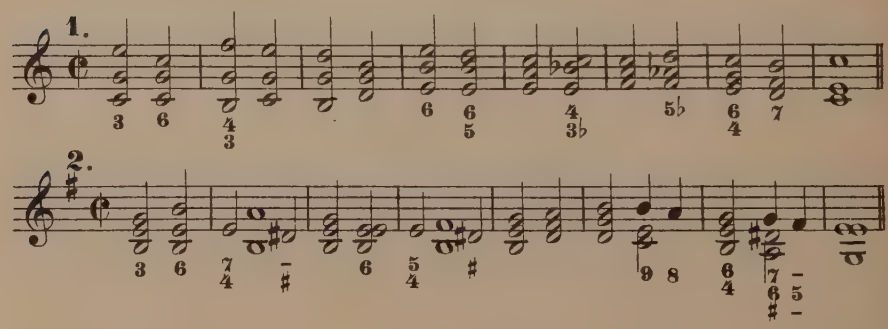
LESSON 50.

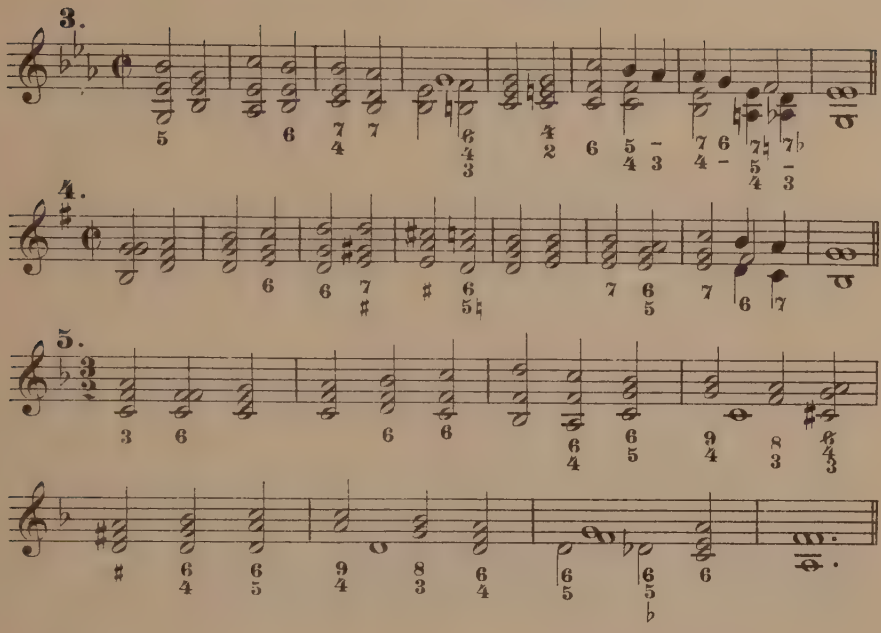
This lesson should be treated like the preceding.
The second exercise contains a retardation in the fourth measure.


1.
C I I I VII° II7 V7 V7 V7 I I I7
IV V7 I V7 I7 II I V7 I
2.
G I I V7 V7 V7 I I I a V7 I G I II7 III I
3.
d I I II°7 VII°7o V7 V7 I g V7 I d I I II°7 V7 I
4.
B♭ I I V V V7 I II7 g 6+ 4 3 V VI – B♭ I
5.
D I I IV I I IV V7 I V I I IV IV V V7 I

LESSON 51.

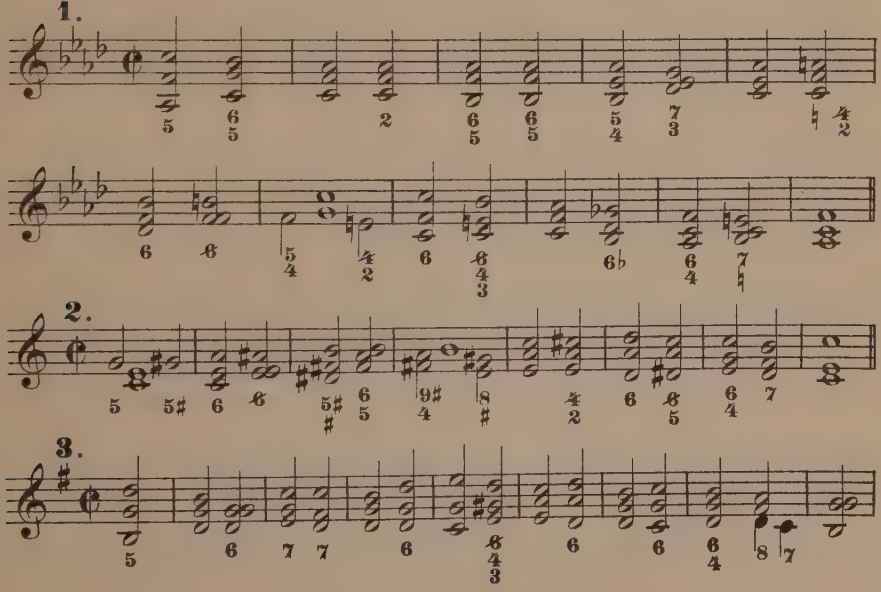
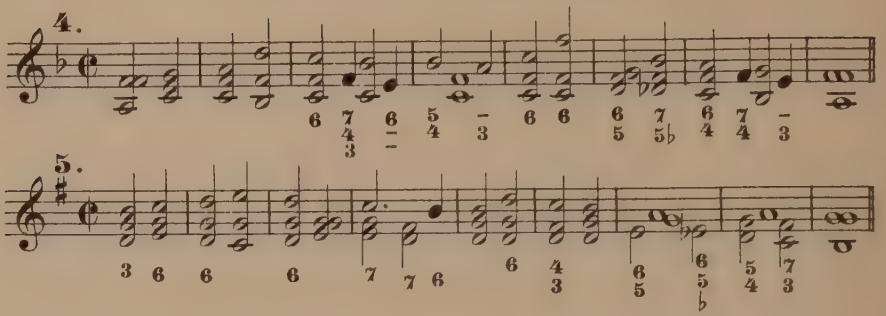
The bass with Roman numerals should be supplied to these chords.





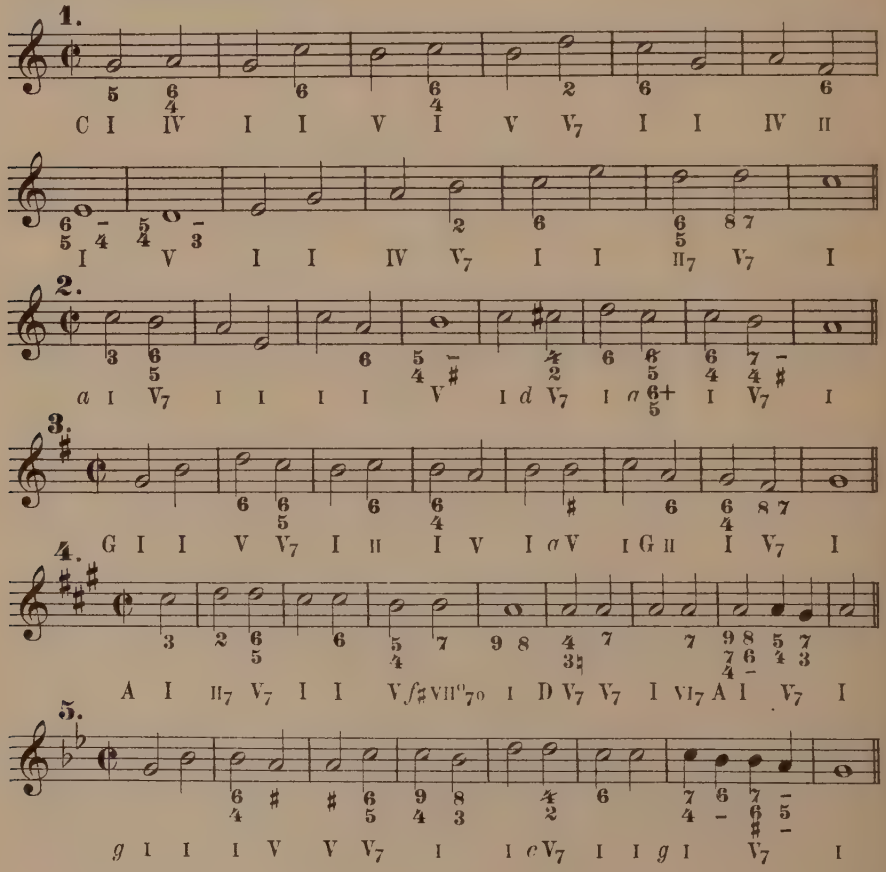
LESSON 52.

The bass with Roman numerals should be supplied to the following exercises. An example of anticipation occurs in the fifth exercise.



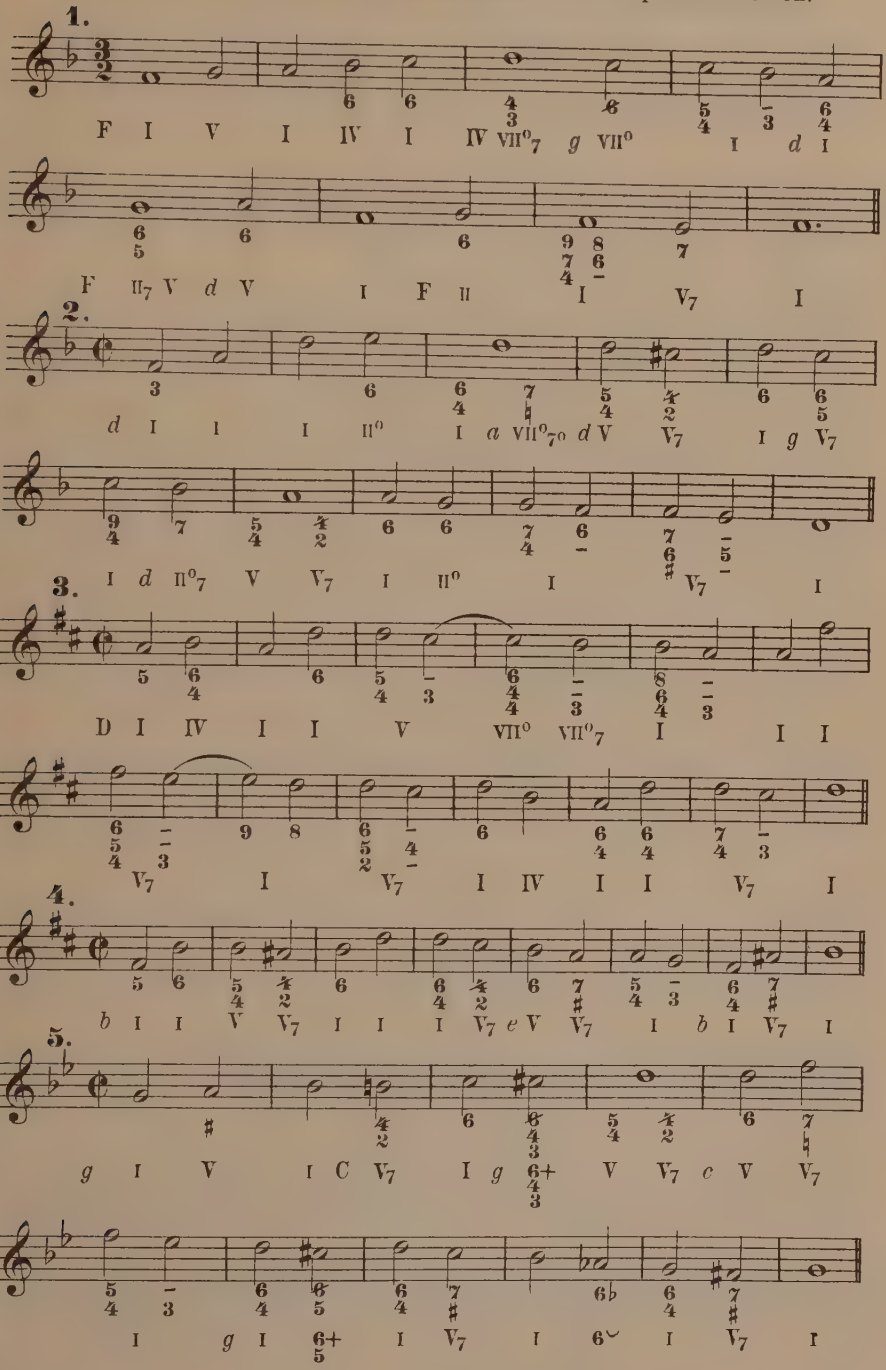
LESSON 53.

To the soprano one should add bass, tenor and alto, copying the Roman numerals beneath the bass.


1.
C I IV I I V I V V7 I I IV II
I V I I IV V7 I I II7 V7 I
2.
a I V7 I I I I V I d V7 I a VI+ I V7 I
3.
G I I V V7 I II I V I a V I G II I V7 I
4.
A I II7 V7 I I V I/♯VII°7o I D V7 V7 I VI7 A I V7 I
5.
g I I I V V V7 I I c V7 I I g I V7 I

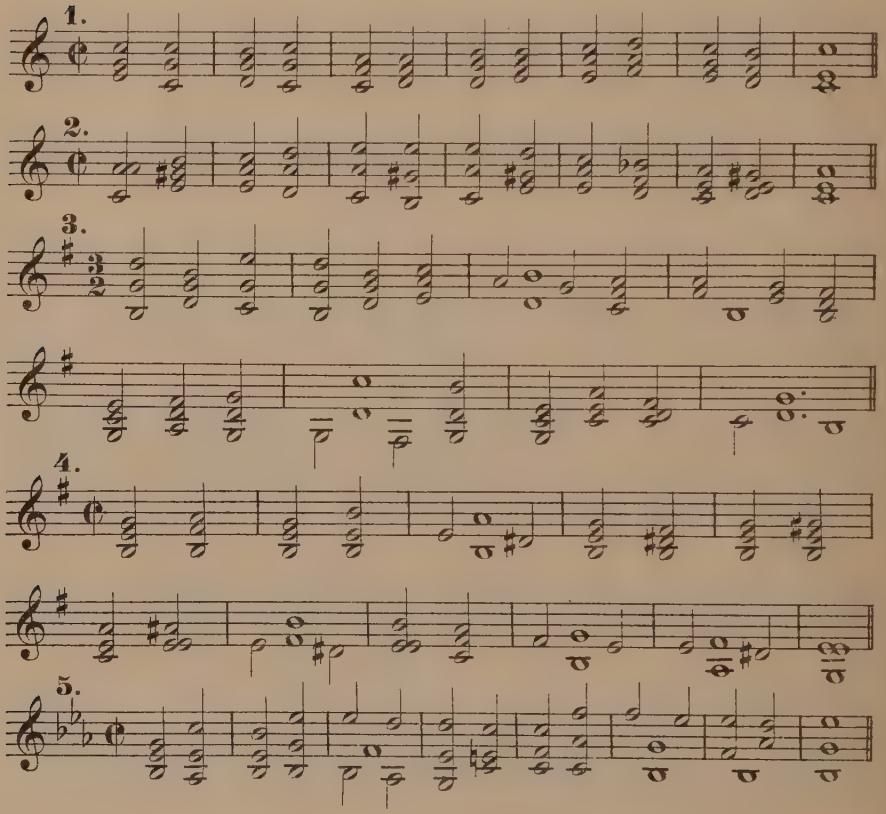
LESSON 54.

The three lower voices should be supplied, as in the previous lesson.


1.
F I V I IV I IV VII°7 g VII° I d I
F II7 V d V I F II I V7 I
2.
d I I I II° I a VII°7 d V V7 I g V7
I d II°7 V V7 I II° I V7 I
3.
D I IV I I V VII° VII°7 I I I
V7 I V7 I IV I I V7 I
4.
b I I V V7 I I I V7 e V V7 I b I V7 I
5.
g I V I C V7 I g V V7 c V V7
I g I I V7 I I g I V7 I

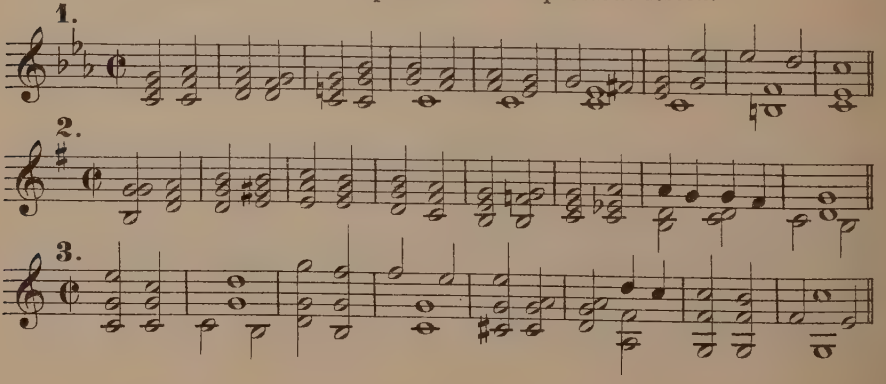
LESSON 55.

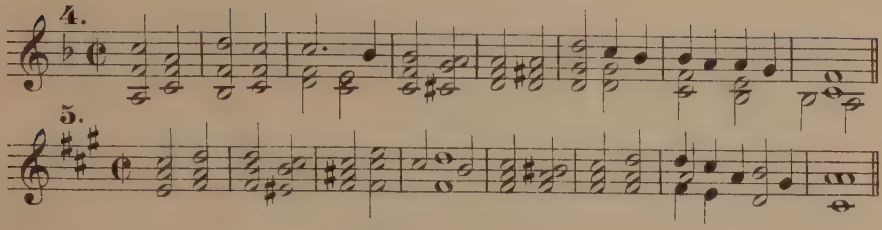
The bass with Roman and Arabic numerals may be subjoined to these chords.



LESSON 56.

These exercises are to be completed like the previous lesson.





LESSON 57.

Lessons 49 to 56, inclusive, contain almost unmistakable signs of what the bass notes should be. Now, however, the student must decide for himself when the indicated harmonies shall be written in the fundamental position and when as inversions. The suggestions in Lesson 43 will be some guide in choosing the bass, but *familiarity* with good harmony is here indispensable. It will have been observed by the thorough student that the bass skips more than either of the other voices; next to this, the soprano moves most freely; the tenor is rather more quiet; and the alto skips least of all. Except in organ-point, the bass rarely remains on the same note for many consecutive chords. It may skip a third, fourth, fifth, sixth or octave, provided this cause no interference in any other voice or a plain violation of the fundamental principle to keep the voices more or less connected. The skip of a seventh in the bass is of rarer occurrence, the one most used being *up* to the seventh of the dominant. The skip of a major seventh is seldom proper. While any of the above skips may occur singly, several in succession sometimes produce bad effects, which should be avoided.

Rules concerning the Bass.

1. The bass must not skip consecutively *in the same direction,* two fourths or two fifths.

2. The bass should rarely *skip* from a six-four chord to different harmony.

3. Literal smoothness (diatonic progression) is less to be sought in the bass than in any other voice.

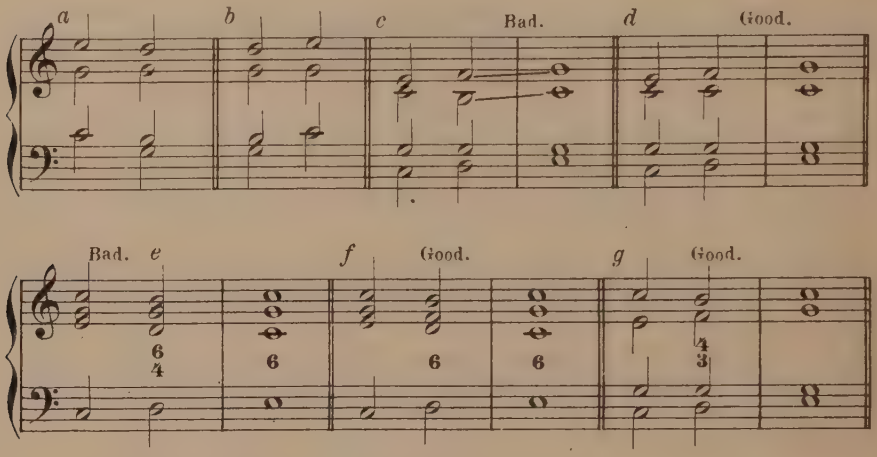
4. When the last three harmonies of a phrase are I V I or I V_7 I, the first of these three chords rarely has its root in the bass, more frequently its third, but in most cases its fifth.

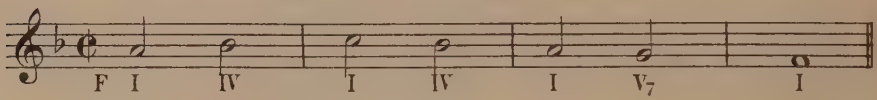
5. When the same soprano note occurs twice in succession, it is well either to place different harmony under each of these notes, or, if both have the same harmony, to introduce a suspension, or to write the two chords with different notes in the bass.

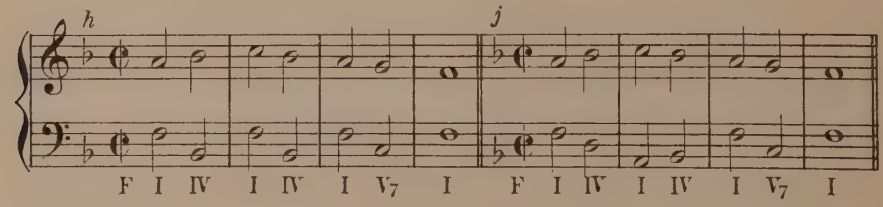
Note. Rapid *tempo* and instrumental compositions present constant and proper exceptions to Rule 5.

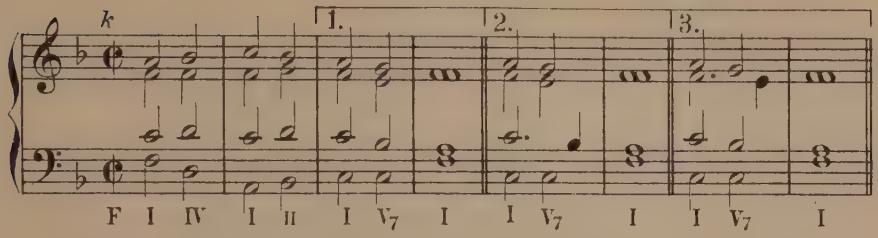
The illustration of Rule 1 appears as that of the 6th Rule in Lesson 43. Rules 2 and 3 require no explanation. Rule 4 is applied below at the close of *k,* though violated at the same point in the exercise at *j*. Rule 5 has some exceptions, but more illustrations, in all the previous exercises in the book, as well as in miscellaneous compositions.

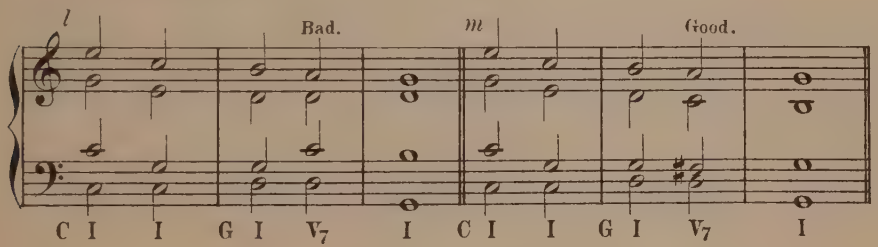
A movement between bass and tenor like that at *a* is often found: between other voices it is seldom allowable. Likewise the hidden unisons between bass and tenor at *b* are proper, but rarely between any other voices.

The faulty progression at *c* is readily improved by writing the tenor and alto as sustained notes. See *d*. The six-four chord of the dominant at *e* (see Lesson 21, 4th Rule for modulations) is inexcusable. At *f* and *g* are shown proper ways of harmonizing the same bass and soprano.

In harmonizing a soprano, the student will need to make perhaps several trials before producing a bass that admits of really smooth harmony in all the other voices. Should the following be taken as an exercise to be harmonized,

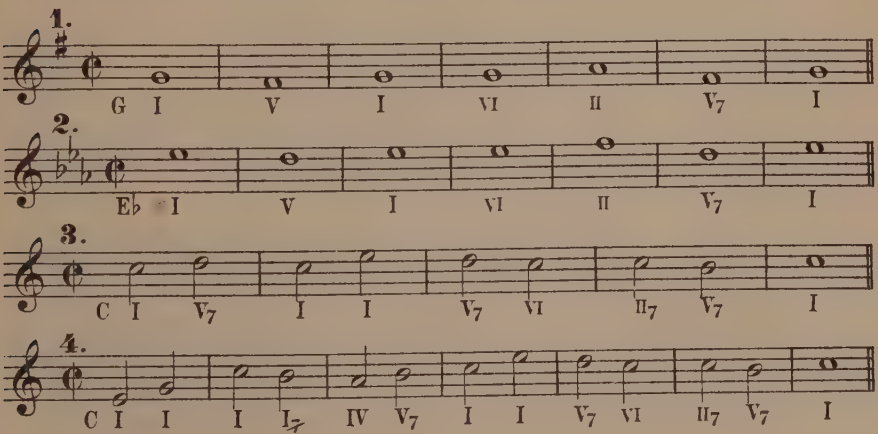


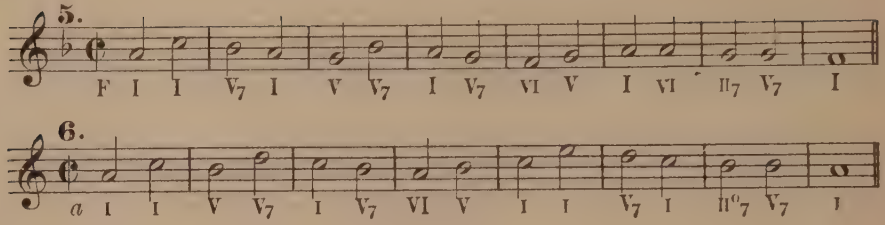
one should first copy it and write the Roman numerals beneath the bass staff. The root of each chord may now be placed in the bass, as at *h*. Should this prove too angular, as in this case, inversions should be introduced, somewhat as at *j*. The tenor and alto being next written, it will often be necessary to again change the bass, especially wherever it seriously interferes with the natural and melodious progression of any other voice.

The arrangement at *j* is good, except a violation of Rule 4. This being corrected as at *k*, below, the whole is further improved by a slight change of harmony in the fourth chord, introducing a minor triad to vary the former monotony of all major harmony.



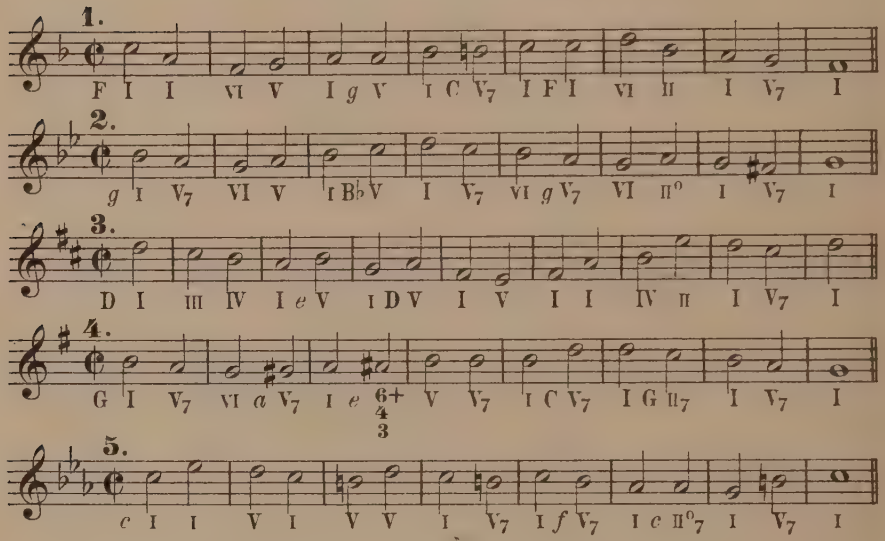
The second and third endings show agreeable changes of rhythm; but the student should at first confine himself to the very simplest manner of writing. Particular reference should here be made to the rules concerning six-four chords in Lesson 21; also to the suggestions in the first part of Lesson 43. When the indicated harmony calls for a 7th, it will often be necessary to introduce it by 87 (called a passing 7th). See remarks on II7 V7 in Lesson 47; also Rule 3 in Lesson 9. Whenever a modulation is required, a chromatic change peculiar to the new key should somewhere appear. Such harmony as the following, at *l*, is unpardonable, while that at *m* is good.

The following sopranos may be harmonized in close or full score, with the harmony open or close, according to the foregoing rules and illustrations. See also Rules in Lesson 43, the first two of which find application in the first two of these exercises.

The Arabic numerals may be omitted in all the remaining exercises.





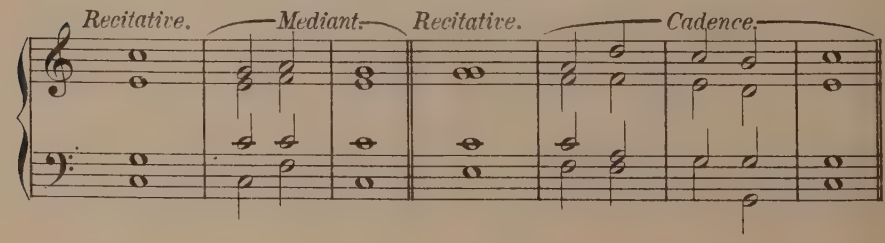
LESSON 58.


1.
F I I VI V I g V I C V7 I F I VI II I V7 I
2.
g I V7 VI V I B♭ V I V7 VI g V7 VI II° I V7 I
3.
D I III IV I e V I D V I V I I IV II I V7 I
4.
G I V7 VI a V7 I e 6+ 4 3 V V7 I C V7 I G II7 I V7 I
5.
c I I V I V V I V7 I f V7 I c II°7 I V7 I

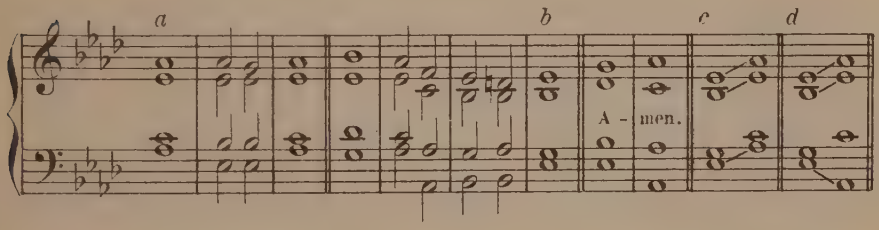
LESSON 59.

DOUBLE CHANTS.

For the purpose of showing what are to be some of the practical results of all the previous study, most of the remaining lessons will be in the more interesting form of *Double Chants* and *Chorals.*

Form of the Single Chant.

The different parts of a chant are named as shown above, though some writers give the name *Mediation* to the first three bars, and *Cadence* to the last four.* No sign of rhythm (**C** or **¢**) could properly apply, as the chords marked *Recitative* have a variable duration dependent upon the accompanying words, of which sometimes but a few, at other times many, are sung with these chords. Indeed, the length of the half notes is only that of the syllables with which they come, in singing. The two larger and unequal divisions are often improperly called *halves*, but the word *phrase* or *strophe* is more accurate. Their termination is marked by a heavier bar, or by a double-bar. When the words of a chant are printed without accompanying music, the vertical lines that intersect them correspond with the bars.

The above chant presents no modulation; and as it would be necessary to repeat it many times in a long Psalm, a sense of monotony would be felt. But a *Single Chant* is too short to admit of establishing the original tonic, modulating to a new key and returning to the first. Some composers attempt to remedy this by modulating in the second phrase, which then closes in the new key; the whole, after all the words of the chant have been sung, being followed by *Amen* and a full cadence to the original key, thus:



But as the repetition of such chants causes the first chord, *a*, to follow the last chord, *b*, consecutive fifths and octaves sometimes result, as in this case, the audible effect being shown at *c;* nor would the contrary movement at *d* correct this. See Lesson 4, Rule 4.

The *Double Chant,* which is merely twice the length of a *Single Chant*, affords abundant space for a strong modulation and a return, within its own form, and is therefore more serviceable for our present purpose.

Rules for Double Chants.

1. The extreme high or low notes of any voice should be avoided during the *Recitative* (the first chord of each phrase).

2. A six-four chord should never be written as the first or the last in any phrase.

3. The second phrase should generally close with the root in the bass; the fourth phrase, always.

4. Consecutive octaves or fifths must not occur between the last chord of one phrase and the first of the next.

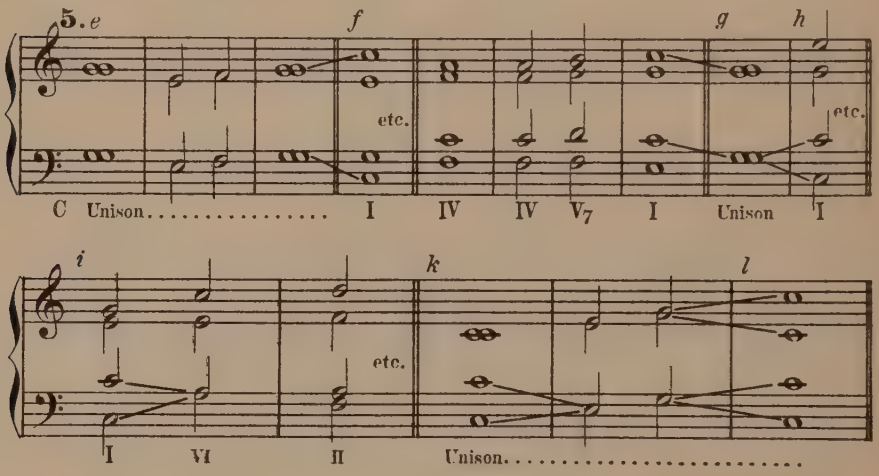
5. When the *Recitative,* or an entire phrase, is unison followed or preceded by full harmony, the consecutive octaves that sometimes result from this are allowable; but such progressions are incorrect where the unison occurs in but two voices.

* Other forms of the Chant are found, adapted to special hymns or sentences.

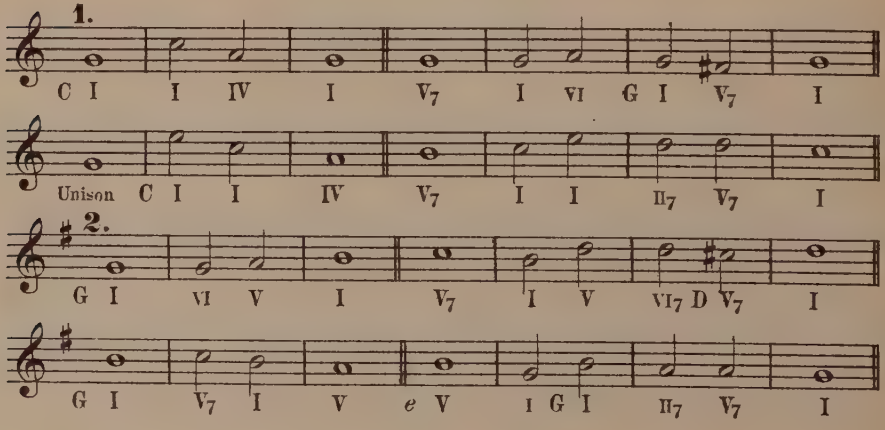
6. The *Recitative* should never contain consecutive half notes, but must be either a whole note or a dotted half note followed by a quarter note.

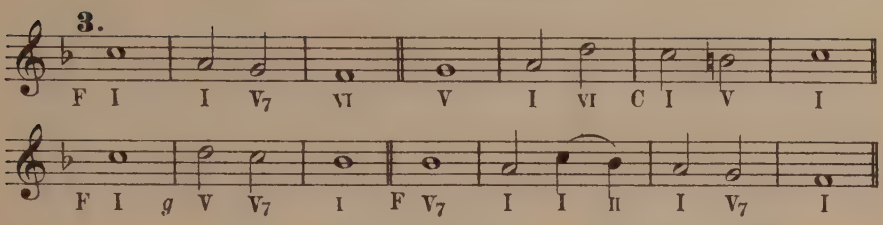
7. Except on the *Recitative,* a separate note must be written for each syllable of the Chant and none of these notes tied. Consecutive notes belonging to but one syllable must be slurred.

The first four rules require no explanation. At 5 *e,* one perceives a succession of consecutive octaves between the voices on the lower staff and those on the upper. This is necessitated by the compass of the various voices and is, in effect, a correct unison passage. The same remarks apply to examples *k* and *l.* At *f,* the consecutive octaves between bass and soprano and at *g,* between tenor and soprano, as well as those at *h,* between bass and tenor are good. The progression at *j,* from an octave to a unison is bad, no unison effect being intended.



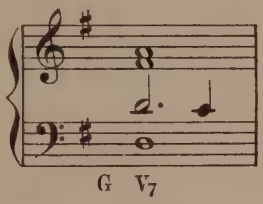
The following Double Chants and Chorals are intentionally kept very simple to meet the probable wants of the student at this point. Each double-bar or heavy bar marks the end of a phrase. See Rule 2; also Lesson 57, Rule 4.



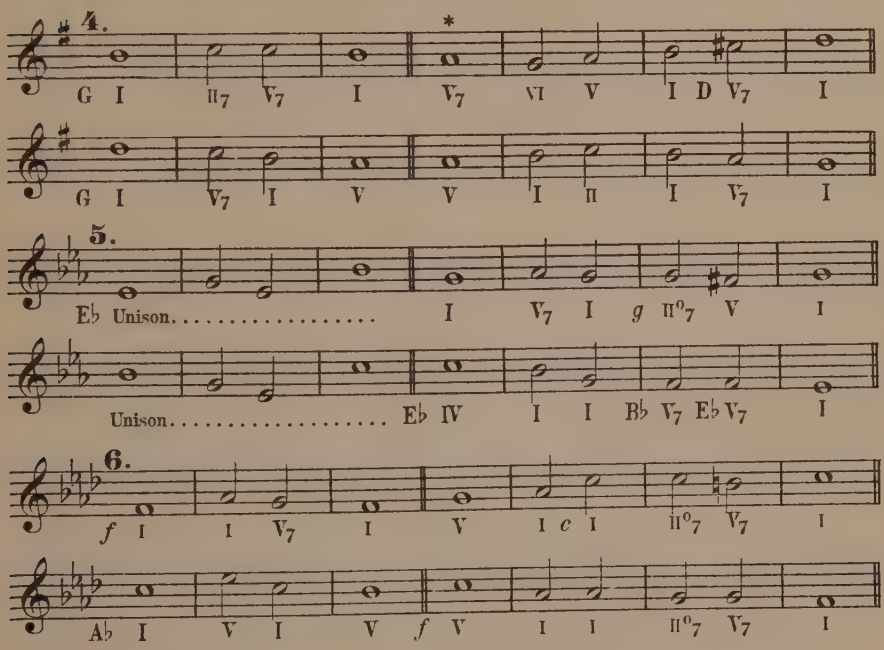


LESSON 60.

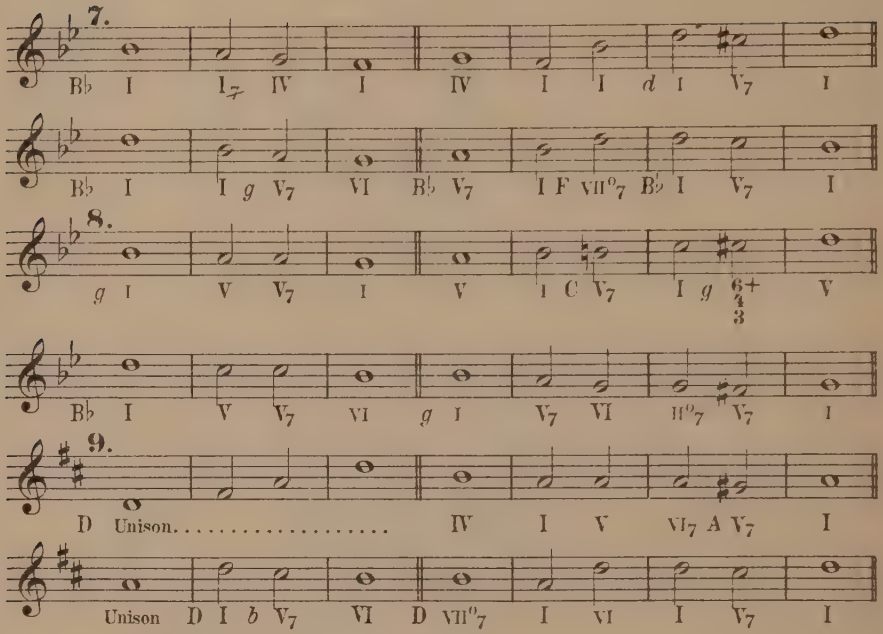
Occasionally when a 7th chord is to be written on the *Recitative,* as at * below, the 7th may be written as a whole note, or it may be introduced as a quarter note after a dotted half (only the last syllable of the *Recitative* coming on this note) as follows: —



Passing-notes are sometimes used on the *Recitative* in the same way.

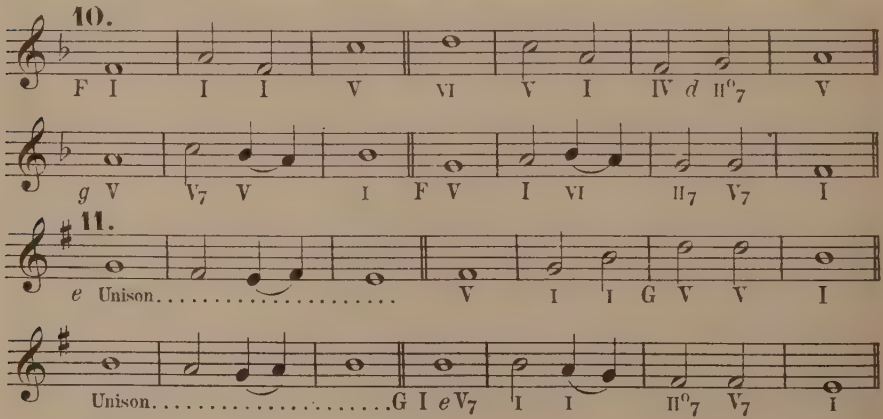

4.
*
G I II7 V7 I V7 VI V I D V7 I
G I V7 I V V I II I V7 I
5.
Eb Unison..... I V7 I g II°7 V I
Unison..... Eb IV I I Bb V7 Eb V7 I
6.
f I I V7 I V I c I II°7 V7 I
Ab I V I V f V I I II°7 V7 I

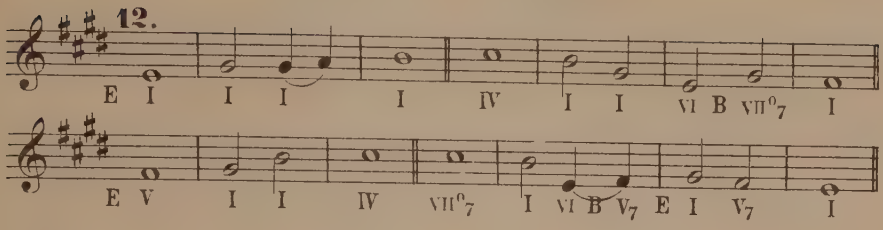
LESSON 61.


7.
B♭ I I IV I IV I I d I V7 I
B♭ I I g V7 VI B♭ V7 I F VII°7 B♭ I V7 I
8.
g I V V7 I V I C V7 I g 6+ V
B♭ I V V7 VI g I V7 VI II°7 V7 I
9.
D Unison. IV I V VI7 A V7 I
Unison D I b V7 VI D VII°7 I VI I V7 I

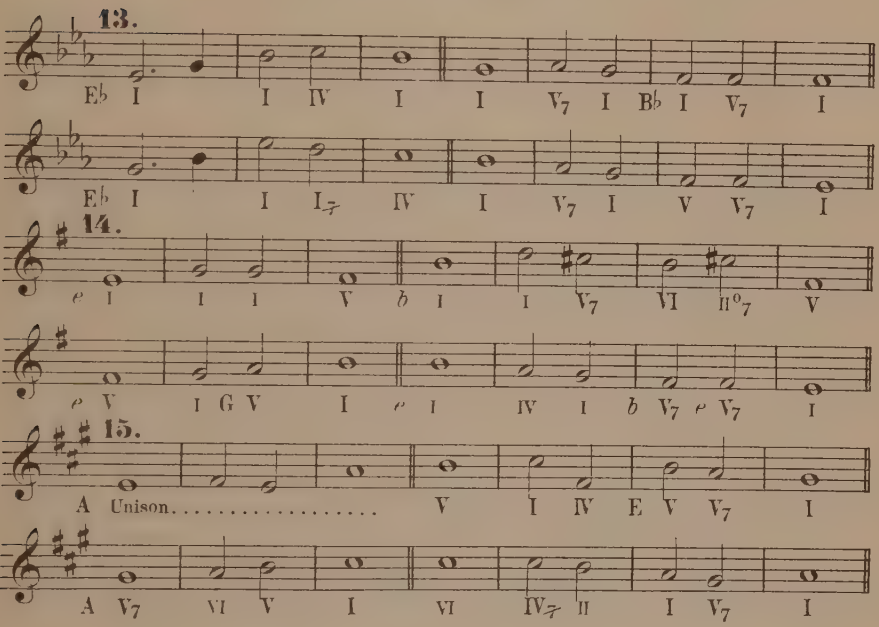
LESSON 62.

The constant introduction of appoggiaturas, passing-notes, etc., would destroy the peculiar beauty of the Chant; but their occasional employment is quite proper. A reference to the definitions in Lesson 42 will enable one to recognize such notes, a few of which occur in this lesson. See also the directions at the beginning of Lesson 60. A suspension is sometimes written in the last chord of the second or fourth phrase, but should not, even there, appear too often. A slur over two quarter notes shows that both are to be sung to the same syllable.





LESSON 63.


13.
E♭ I I IV I I V7 I B♭ I V7 I
E♭ I I I♯ IV I V7 I V V7 I
14.
e I I I V b I I V7 VI II°7 V
e V I G V I e I IV I b V7 e V7 I
15.
A Unison. V I IV E V V7 I
A V7 VI V I VI IV♯ II I V7 I

LESSON 64.

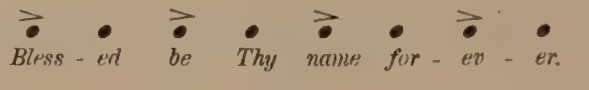
CHORALS.

The *Choral* is perhaps the most sublime form of devotional music. It has neither the fire of the Fugue nor the less dignified character of religious compositions in a more florid rhythm. It consists principally of notes of equal rhythmic value, with here and there a passing-note or appoggiatura. In America, Chorals are generally printed in half notes; but in foreign countries they frequently appear in quarter notes, though performed there, as here, in a somewhat slow and sustained manner. A most interesting article on Chorals may be found in the *Musikalisches Lexicon* von Arrey von Dommer. Chorals being written for various hymns, are in corresponding meters. The word *meter* shows not only the number of syllables in each line, but particularly the number and arrangement of the accents. For example: — the letters L. M. (denoting Long Meter)

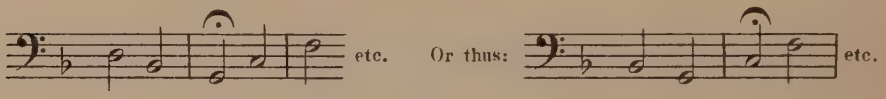
refer to a stanza of four lines, eight syllables in each, these syllables being alternately light and accented, usually beginning on the former, thus: —

8s refers likewise to a stanza of four lines, eight syllables in each, with the accents distributed thus:

rarely thus: —



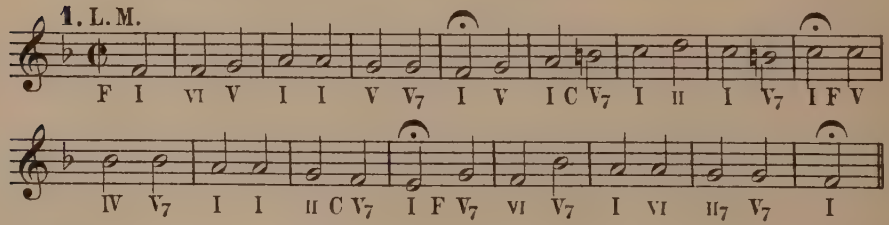
The many varieties of meter may be most readily learned by reference to any collection of hymns. Certain Chorals require a slight pause on the last note of each line, this being indicated by the sign 𝄐 directly over the note. At such points one should be careful to observe the 4th Rule under Double Chants. When either the first or the second of three consecutive bass notes comes under the hold, 𝄐, it is sometimes allowable that these should present successive skips of fourths, or of fifths, in the same direction, thus: —

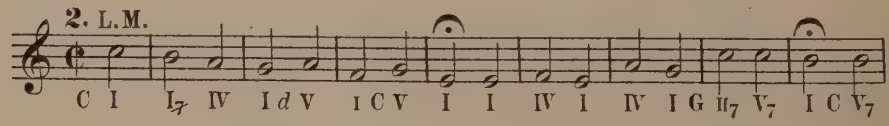
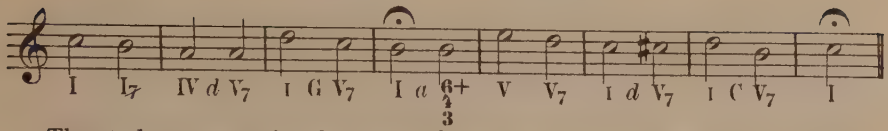


Although a $\frac{6}{4}$ chord may occasionally *begin* any but the first line of a Choral (if properly introduced), it should never be written under the hold, 𝄐.

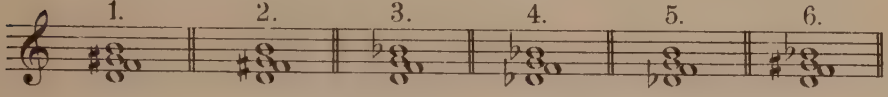
A reference to the rules in Lessons 43 and 57 will be of great assistance in the following lessons.

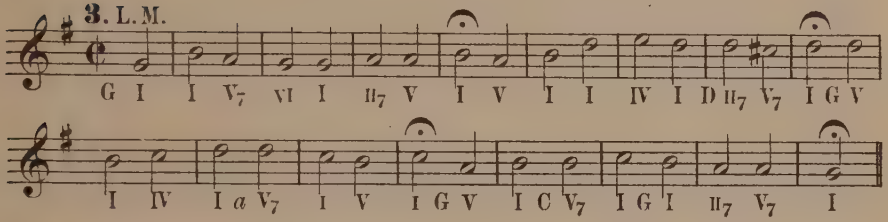
☞ The tenor should be written on the lower staff, throughout.

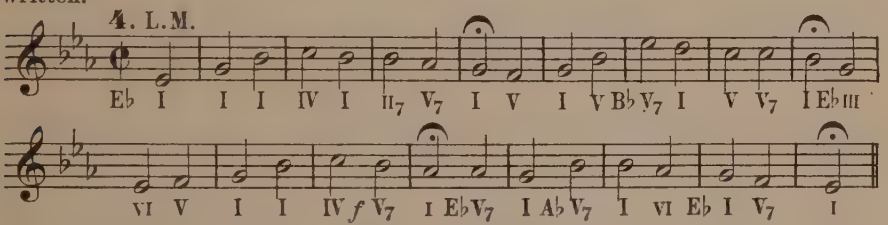


The student should write a modulation from the foregoing Choral to the following.



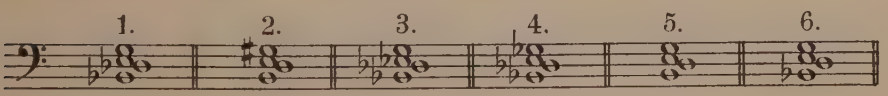
The student may write the name of each chord below; also the proper letter showing the key in which it most naturally appears.



LESSON 65.

A modulation from the preceding Choral to the following should now be written.

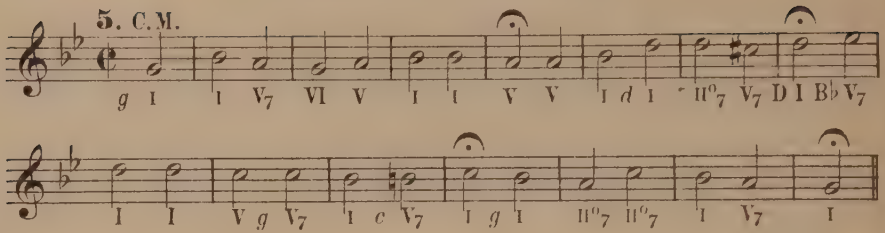


The names of these keys and chords should be written below them, as before.

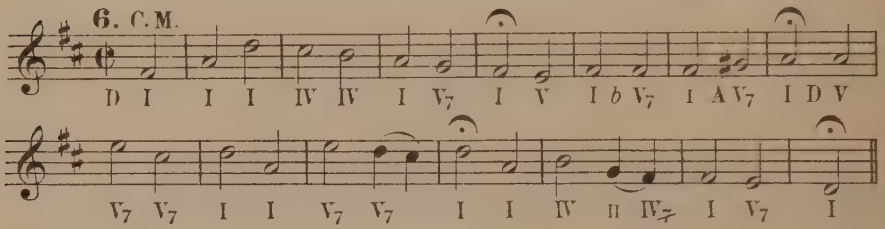


LESSON 66.

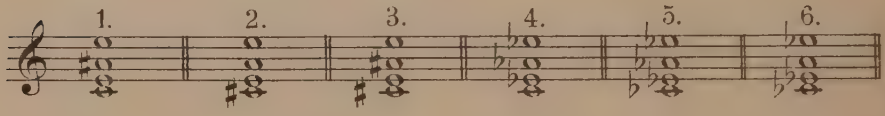
The letters C. M. denote Common Meter. The student may here repeat the definition of Long Meter and originate one of Common Meter, derived from inspecting the notes and natural accents of the following Choral, which is also to be harmonized.



A modulation connecting these two Chorals should be written here.

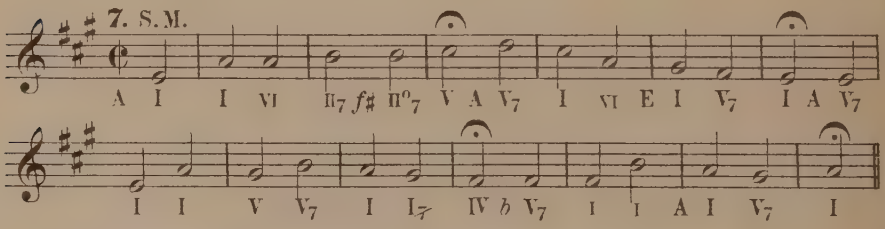


These keys and chords are to be named.

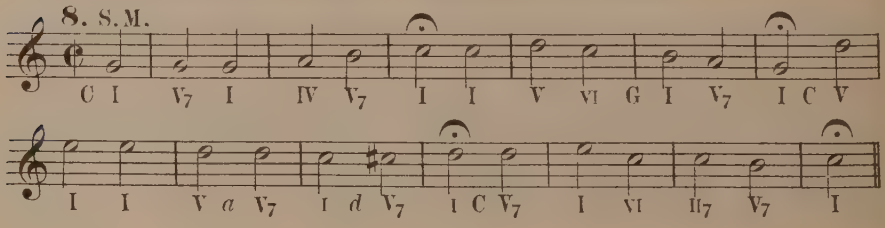


LESSON 67.

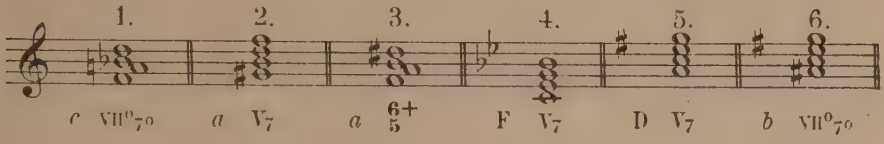
A written definition of Short Meter (denoted by S. M.) should accompany the following Choral.



A modulation from A major to C major should occur here.

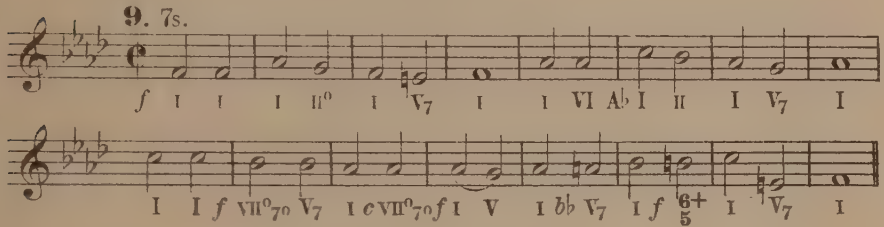


The student may correct the following chords, leaving the Roman numerals as they are.

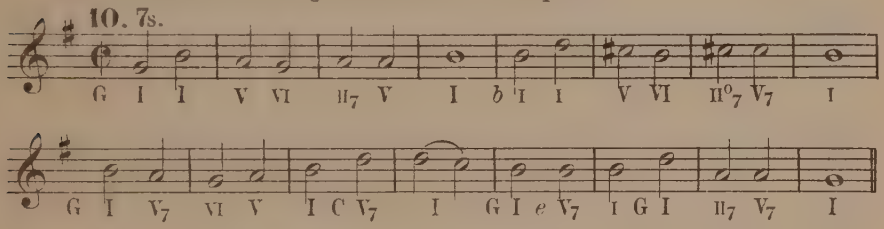


LESSON 68.

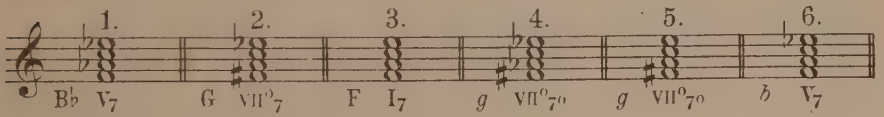
Let a definition of 7s be written here.



A modulation connecting these Chorals is required.

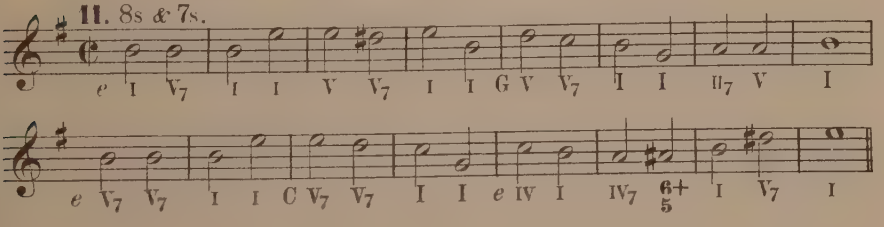


Corrections in the following names of keys and Roman numerals should be made by the student, leaving the chords as they are.



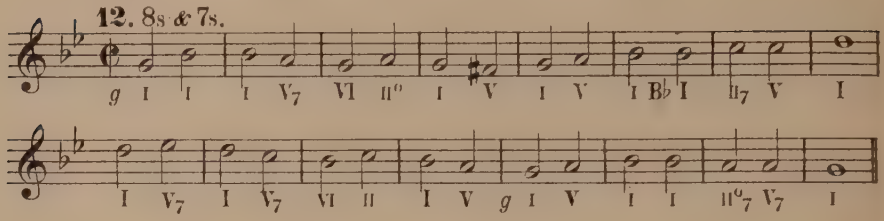
LESSON 69.

A written definition of 8s and 7s is here required.



A modulation from G major to *g* minor is needed here.

12. 8s & 7s.



LESSON 70.

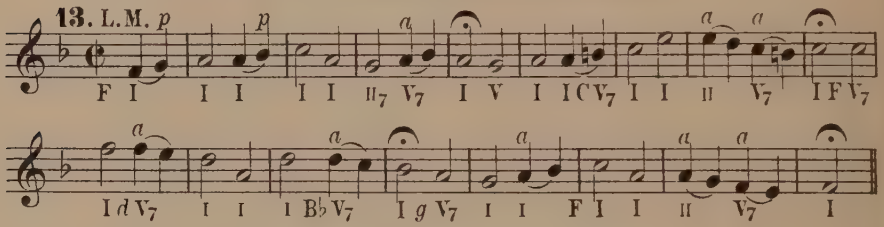
Although a rhythm similar to the following is greatly inferior to that peculiar to Chorals, the student will find this a useful preparation for the proper harmonizing of melodies containing passing-notes and other dissonances.

In this lesson the letters *over* the melody are used thus: —

a denotes an appoggiatura and *p*, a passing-note.

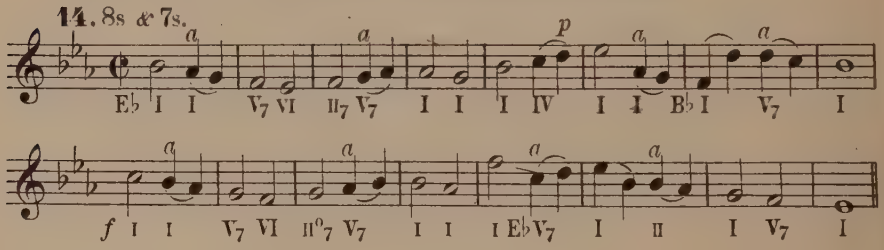
Such notes should sometimes appear in other voices, also.

13. L.M. *p*



A modulation should be written connecting these Chorals.

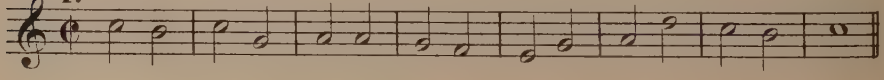
14. 8s & 7s.

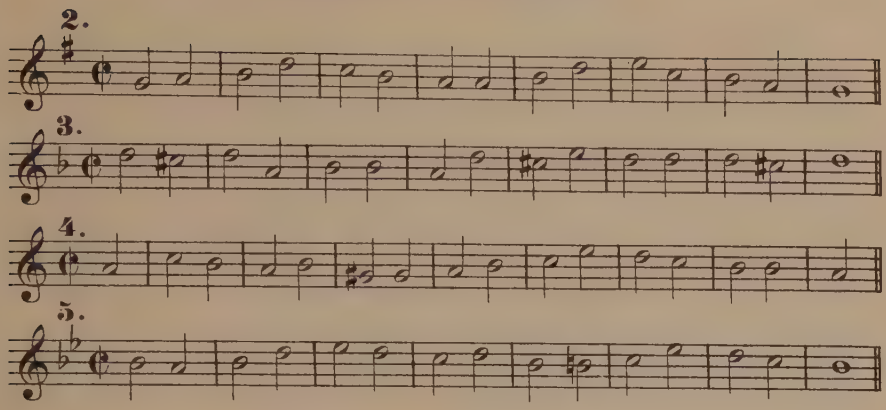


LESSON 71.

In supplying original harmony to the following exercises (soprano) the student is urged not to seek any originality whatever, but to confine himself to *simplicity* and *accuracy*, avoiding extreme modulations and too frequent chromatic changes.

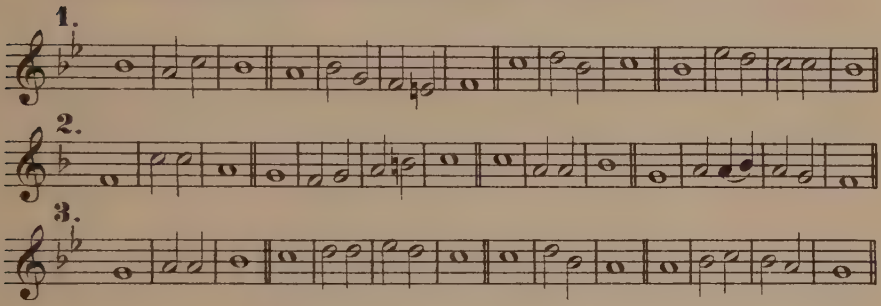
1.





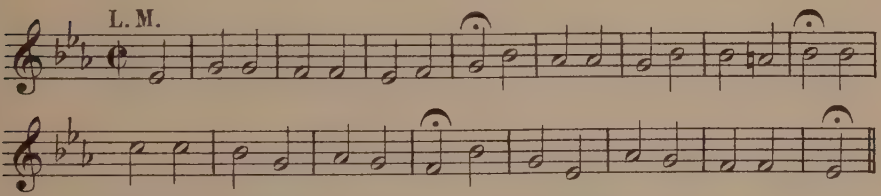
LESSON 72.

Full harmony should be supplied to the following Chants.

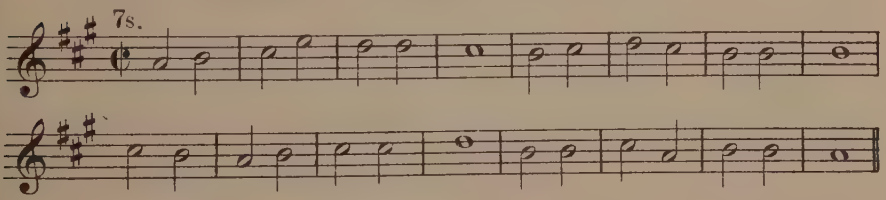


LESSON 73.

Full harmony is required for these Chorals.

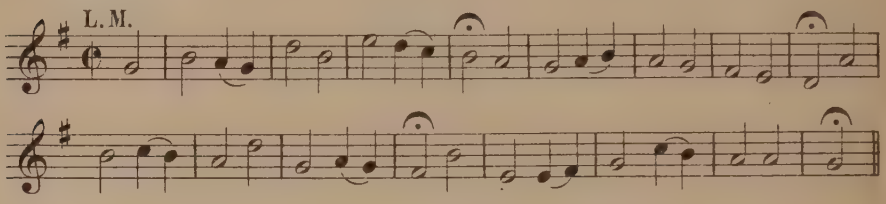


The proper modulation should connect these Chorals.

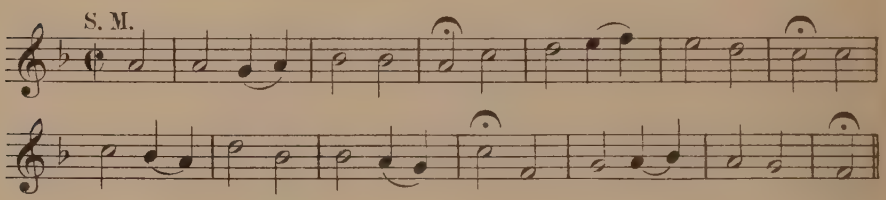


LESSON 74.

One may harmonize the following Chorals, introducing a few passing-notes or appoggiaturas.

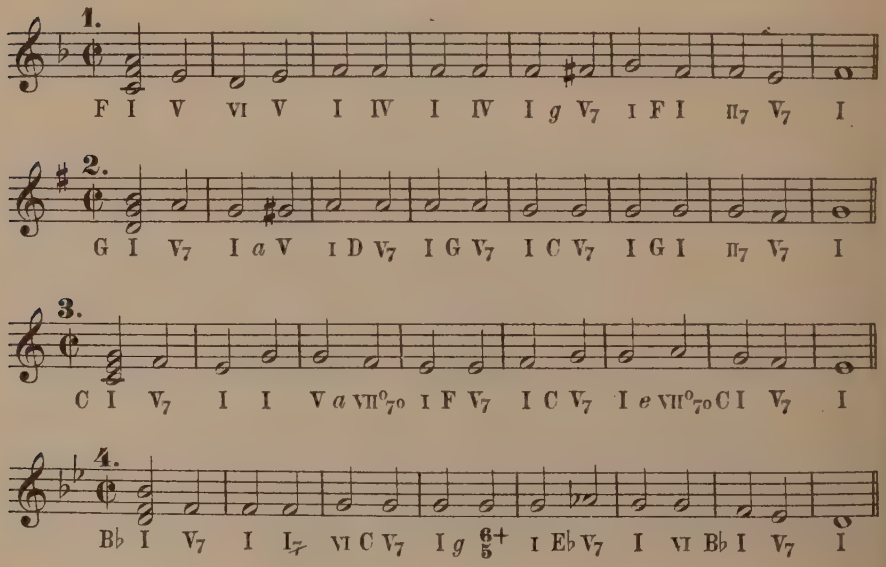


A modulation should here occur.



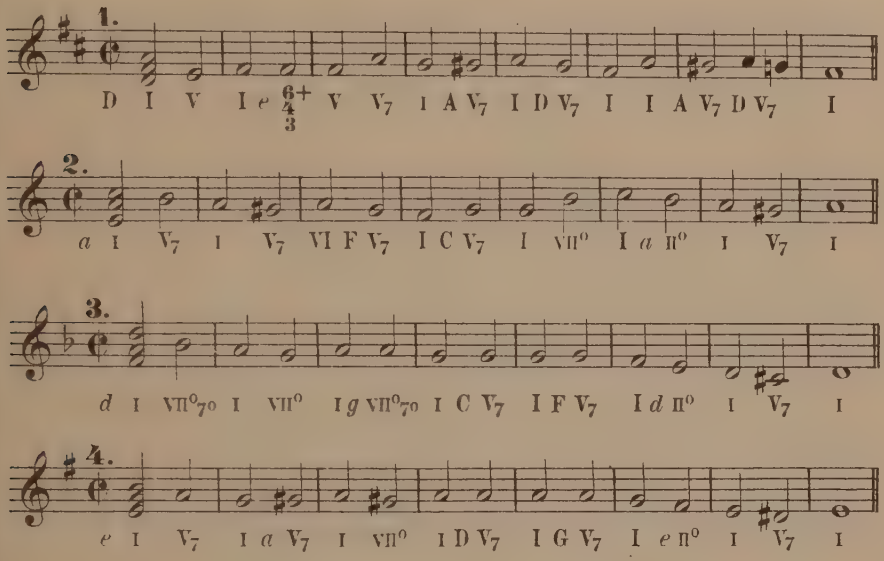
LESSON 75.

The following exercises are for the alto, to which bass, tenor and soprano should be added. The student may write original harmony, if preferred.


1.
F I V VI V I IV I IV I g V7 I F I II7 V7 I
2.
G I V7 I a V I D V7 I G V7 I C V7 I G I II7 V7 I
3.
C I V7 I I V a VII°7o I F V7 I C V7 I e VII°7o C I V7 I
4.
Bb I V7 I I7 VI C V7 I g 6/5+ I Eb V7 I VI Bb I V7 I

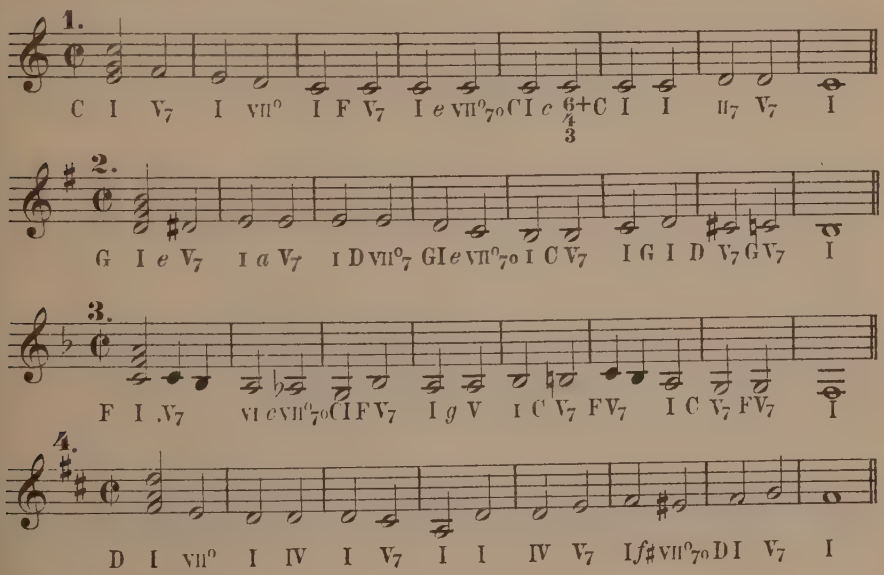
LESSON 76.

The following, for alto, should be harmonized by adding the three other parts.


1.
D I V I e 6+ 4 3 V V7 I A V7 I D V7 I I A V7 D V7 I
2.
a I V7 I V7 VI F V7 I C V7 I VII° I a II° I V7 I
3.
d I VII°7o I VII° I g VII°7o I C V7 I F V7 I d II° I V7 I
4.
e I V7 I a V7 I VII° I D V7 I G V7 I e II° I V7 I

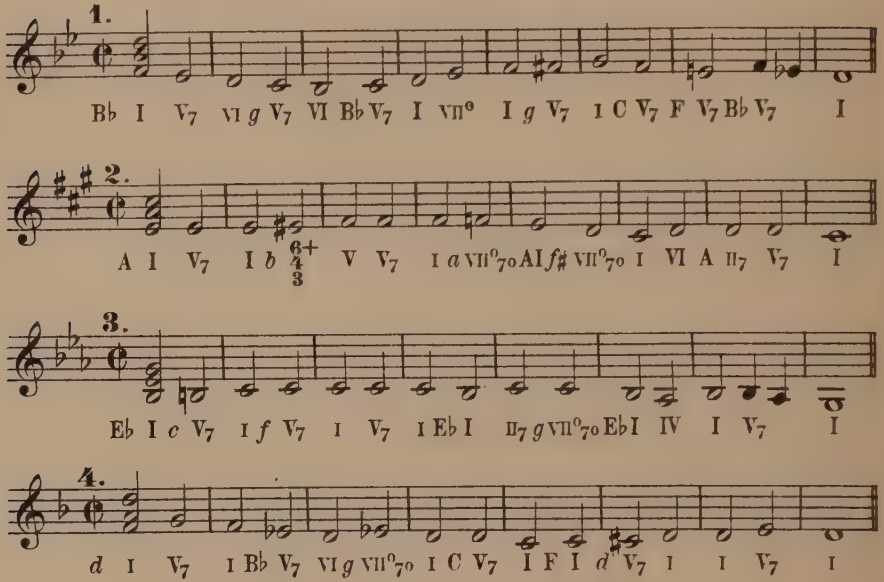
LESSON 77.

The following are for the tenor, and require bass, alto and soprano to be added to them.


1.
C I V7 I VII° I F V7 I e VII°7o C I c 6+ 4 3 C I I II7 V7 I
2.
G I e V7 I a V7 I D VII°7 G I e VII°7o I C V7 I G I D V7 G V7 I
3.
F I V7 VI c VII°7o C I F V7 I g V I C V7 F V7 I C V7 F V7 I
4.
D I VII° I IV I V7 I I IV V7 I f♯ VII°7o D I V7 I

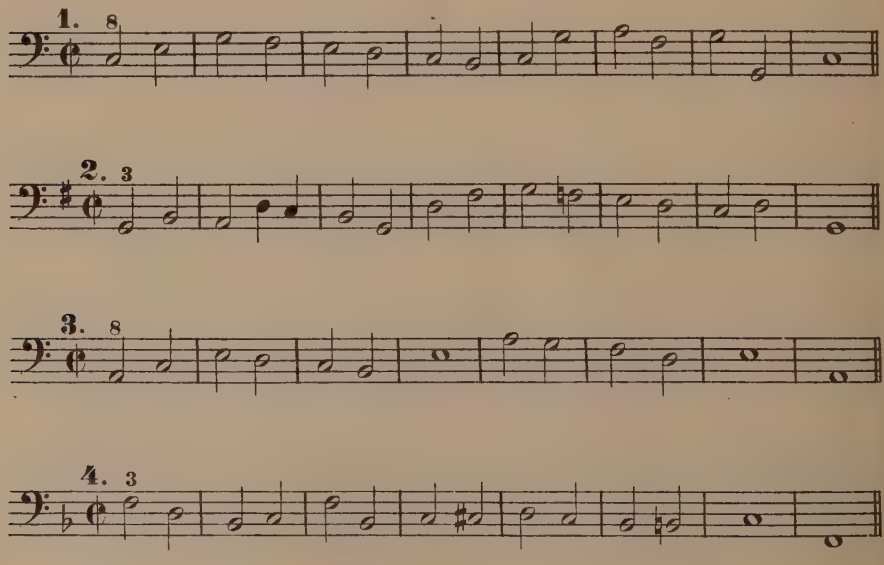
LESSON 78.

Bass, alto and soprano should be supplied to the following tenors.


1.
B♭ I V7 VI g V7 VI B♭ V7 I VII° I g V7 I C V7 F V7 B♭ V7 I
2.
A I V7 I b 6+ 4 3 V V7 I a VII°7o A I f♯ VII°7o I VI A II7 V7 I
3.
E♭ I c V7 I f V7 I V7 I E♭ I II7 g VII°7o E♭ I IV I V7 I
4.
d I V7 I B♭ V7 VI g VII°7o I C V7 I F I d V7 I I V7 I

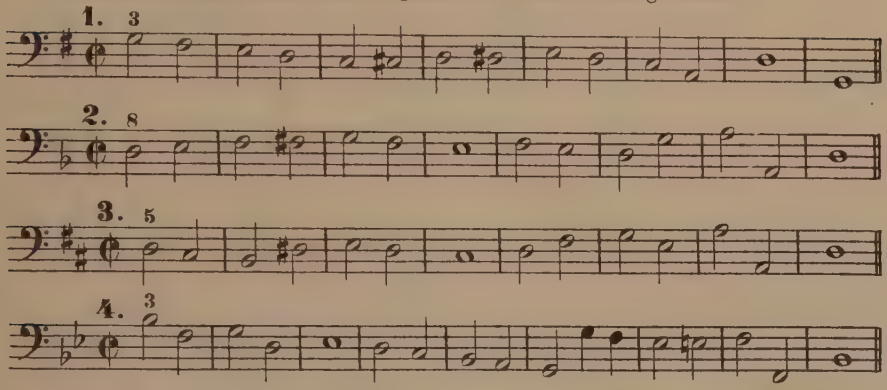
LESSON 79.

The three other voices should be added to the following basses. The student may choose the position of the first chord in each exercise, if preferred.



LESSON 80.

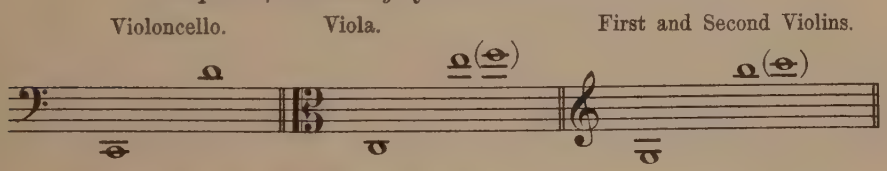
Tenor, alto and soprano are required for the following basses.



Should the student desire still further exercise in harmonizing melodies, he may use the *Supplementary Exercises to the Elements of Harmony* by the same author, which contains fifty German chorals copied from standard sources, somewhat more difficult than those in this work and calculated to prepare one for the study of Counterpoint.

It is suggested as a very useful exercise that the student take parts of simple instrumental works and arrange them in four voiced harmony. The opening theme of *Variations;* certain *Romances* and *Songs without Words;* the first part of various slow movements in *Sonatas* — these and similar works may be arranged in this way. Another interesting study is to arrange such pieces for the usual string quartette, keeping the music, for simplicity's sake, within what is known as the "First Position" on each instrument, thus: —

Compass of the String Quartette in the First Position.



Observe that the tenor part, sustained by the viola, is here written with the alto clef.

The writing for male or female quartette, while subject to the same general rules as in writing for mixed quartette, is obviously more difficult in several respects and requires special practice.

It is found a most useful exercise to mark the modulations in whatever compositions one may be studying: also to write simple accompaniments (for example, a bass note followed by chords) to many melodies, vocal or instrumental.

Assuming that, under the guidance of an intelligent instructor, the student has come thus far with a clear understanding of every principle here presented, it is earnestly hoped that these "Elementary Lessons" will have awakened an interest in Harmony such as will render it a profound and delightful study to be pursued not for a term, nor for a year only, but for a lifetime.

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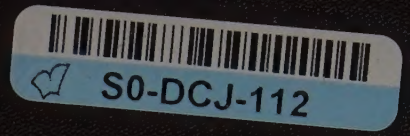
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